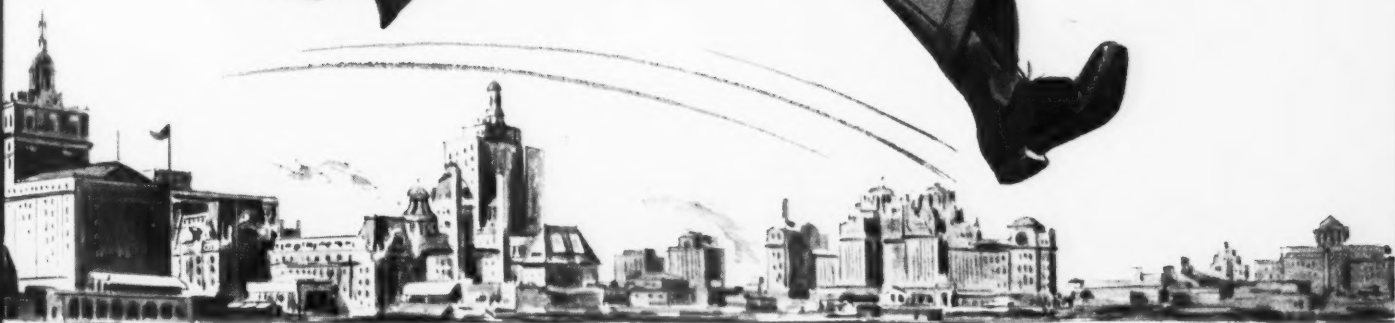


TECHNOLOGY DEPT.

Chilton's MOTOR AGE

JANUARY 1953



This Issue:

"I've Got A S Ideas for You"

Tough but oh so Gentle in Regular or Chrome

FOR ALL PASSENGER CARS!

Whether the job calls for regular or chrome-faced piston rings, you'll find the answer in a Hastings Steel-Vent Set. And whether the job is re-ring, re-bore or re-sleeve, you'll find Steel-Vent tough on oil-pumping, gentle on cylinder walls.

It's gentle because Steel-Vent's two wall-contacting steel sections have rounded edges which provide hairline contact and reduce drag to a minimum.

It's gentle because the Steel-Vent spacer has extra wide vents that let oil flow through freely for extra cylinder wall lubrication.

It's gentle because Steel-Vent's flexible, low-tension inner spring works only against the steel sections—holds them on the cylinder wall with soft pressure.

Result: maximum life, minimum wear.



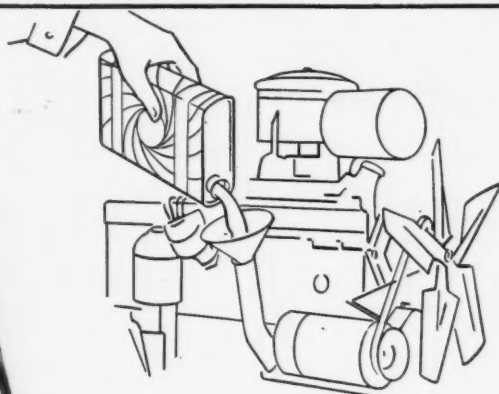
Hastings gives you complete coverage for all passenger cars—in regular and chrome sets—Motor Engineered for each make and type of engine, for every engine condition and operating need. Hastings Manufacturing Co., Hastings, Michigan; Hastings Ltd., Toronto (Piston Rings, Spark Plugs, Oil Filters, Casite, Droul)

HASTINGS

STEEL-VENT PISTON RINGS
Regular or Chrome-Faced

ENGINEERED FOR REPLACEMENT SERVICE IN CARS, TRUCKS, BUSES AND TRACTORS

Every time you make an **OIL CHANGE**
 Sell a quart of **PERMATEX TOON-OYL®**



It is surprising how often a quart of Toon-Oyl added to the crankcase oil will make a sluggish engine purr like a kitten. It's only good business to suggest it whenever you make an oil change and whenever a driver complains about performance of his engine. There's extra profit in it for you and you please your customer.

1. Cleans gummed working parts

Permatex Toon-Oyl dissolves carbon-gum deposits, frees sticky valves and rings, leaving working parts clean.

2. Eliminates excessive wear

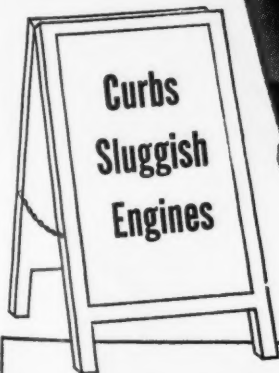
Permatex Toon-Oyl is specially formulated to retard acid action and corrosion which is the cause of 90% of engine "wear".

3. Increases power

Permatex Toon-Oyl increases power two ways...by freeing working parts from carbon-gum and through improved lubrication by coating metal parts with a friction resisting film.

PERMATEX COMPANY, INC.
 Brooklyn 35, N. Y.

*Over 50 Chemical Products for
 better automotive maintenance*



PERMATEX TOON-OYL®

All over America — for millions of viewers



**Tuesday Night
is
TEXACO Night
with
AMERICA'S No. 1
OIL SALESMAN**

**ON THE TEXACO STAR
THEATER**

★ All over the U. S.— in 57 cities — Milton Berle with an all-star cast is entertaining millions of Americans — right in their own living rooms!

And TV is just one part of a powerful year-'round advertising program that's packed with sell for Texaco Dealers everywhere — full-color national magazine pages . . . famous Metropolitan Opera Broadcasts that reach additional millions . . . thousands of billboards from coast to coast . . . plus many local Texaco Dealer promotions.

THE TEXAS COMPANY



Jimmy Nelson — amazing ventriloquist who's made a terrific hit on the TEXACO STAR THEATER — with Danny O'Day and Humphrey Higsby.



No wonder TEXACO DEALERS are such busy dealers!

**All star line-up for
TEXACO DEALERS**

Sky Chief and FIRE-CHIEF GASOLINES

**HAVOLINE and
TEXACO
MOTOR OILS**

**MARFAK
CHASSIS
LUBRICANT**

**PT
ANTI-FREEZE**

**REGISTERED
REST
ROOMS**

Chilton's MOTOR AGE

WITH WHICH IS COMBINED AUTOMOBILE TRADE JOURNAL

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For THE AUTOMOTIVE SERVICE INDUSTRY

LXXII, No. 2

January, 1953

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"I Sell Lots of WEED Tire Chains"

"Sure I sell WEED tire chains—lots of them—and at a good profit. It's easy to sell WEED V-Bars or WEED Regulars. Everybody knows them and by getting my display out well before the bad weather, I have most of my regular customers taken care of. Then I re-order from my jobber to take care of customers who buy at the last minute. I make money selling WEED chains."

- You can sell lots more WEED chains to your regular customers by starting early, before bad weather sets in. WEED V-Bars are sure-sellers because of their fine features. They have flaring reinforcements with 288 gripping points that double the bite on snow or ice. Their opposite right-left construction gives two-way grip and balanced traction. So, WEED V-Bars stop shorter and safer, start quicker and hold straighter. On top of that, they give more than double the wear of regular tire chains.

- WEED Zip-On Appliers make it easier to put on chains. Sell a pair of Zip-Ons with every pair of WEEDS. Tell your customers snug chains wear longer and to take up slack when it occurs.



**AMERICAN CHAIN & CABLE
COMPANY, INC.**
York, Pa. • Bridgeport, Conn.

Don't S'kid Yourself

STOPPING ON GLARE ICE AT 20 M.P.H.

..... 77 ft.	with Reinforced Tire Chains
Natural Rubber Tires* 209 ft.
Winterized Tires 188 ft.
Mud-Snow Tires 201 ft.

*For stopping or starting on ice or snow, synthetic rubber tires skid or spin 10% to 50% more than natural rubber
(All figures in this panel are quoted from National Safety Council Tests)

Flaring Reinforcements with Right-Left Construction
GIVE DOUBLE GRIP and REDUCE SIDE-SKID



ZIP-ON APPLIERS

make it
easier
to put on
chains

**The Tire Chain that Doubles the Wear
and Doubles the Bite on Ice or Snow...**

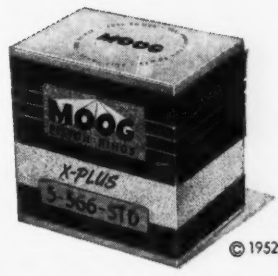


WEED V BARS

HAVE *YOU* TRIED
MOOG PISTON RINGS?

THE WORD IS GETTING AROUND . . .

"RESTORE POWER"



© 1952, M.I.I.

MOOG INDUSTRIES, INC.
6650 Easton Ave., St. Louis 14, Mo.

COST LESS . . . SEAT FASTER . . . CONTROL OIL BETTER



Designed to Serve YOU



The most COMPLETE Bearing Line



Always QUICKLY Available



Ask your Federal-Mogul Jobber



FEDERAL-MOGUL SERVICE

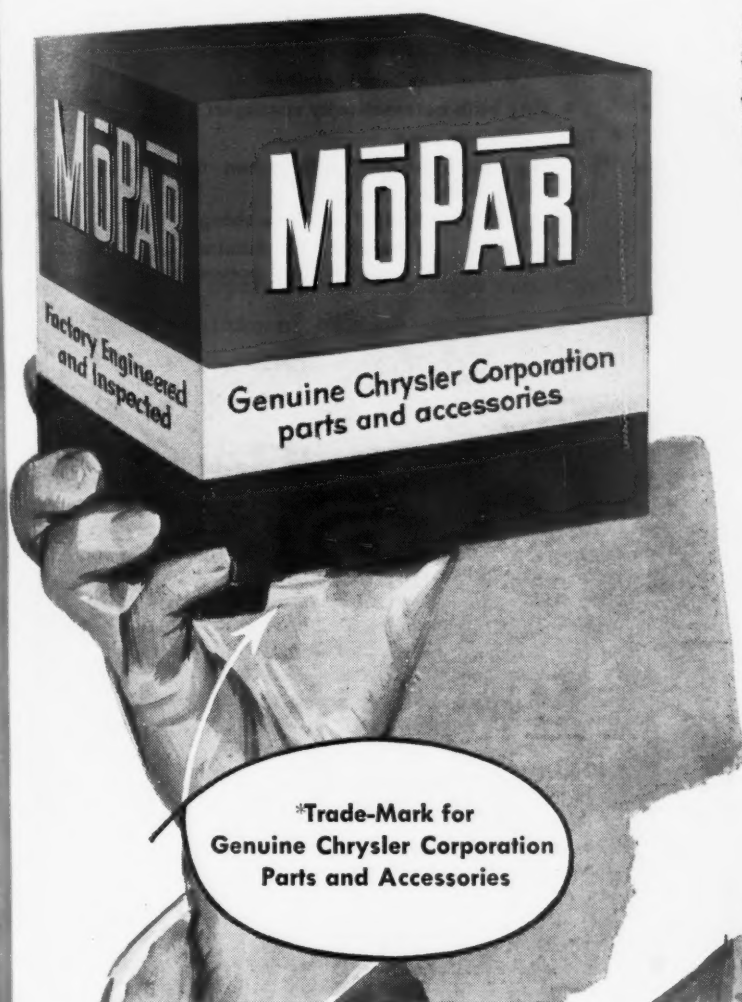
(Division of Federal-Mogul Corporation)

DETROIT 13, MICHIGAN

Engine Bearings (Main, Connecting Rod and Camshaft) • Bushings • Connecting Rod Service—Exchange Insert Rods, Rebabbitted Rods • Connecting Rod Bolts and Nuts • V-Seam Piston Pin Bushings • Shims and Shim Stock

When it says **MOPAR** * you're sure it's right

for any **PLYMOUTH • DODGE • DE SOTO •**
CHRYSLER • DODGE "Job-Rated" TRUCK



It's smart to be sure! It's wise to use MoPAR parts and accessories and be sure of high quality, perfect fit and top performance. When you depend on MoPAR, customers know they can depend on you.

These genuine Chrysler Corporation parts and accessories are bound to do a better job—they're made to exactly the same high standards as original parts. They're easier to install—in less time, with less trouble—and they get results that bring a heap of satisfaction all 'round!

When you service Plymouth, Dodge, De Soto or Chrysler cars or Dodge "Job-Rated" Trucks, be sure you're right, with MoPAR!

CHRYSLER CORPORATION • PARTS DIVISION • DETROIT 31, MICHIGAN



**AUTO-LITE Promotion—
greatest in history**

Sensation

FEATURES

- Solders in 3 to 5 seconds.
- Cools quickly.
- Reaches "inaccessible" spots.
- Tiny bulb automatically spotlights work.
- Tips easily replaced.
- Economical—heats only when trigger is pressed.
- Has rugged tip for probing.
- Balanced for maximum comfort and accuracy.



**This \$12⁹⁵ WEN Soldering Gun
Only \$4⁹⁵ with every \$29⁹⁵ order of**

AUTO-LITE
wire and cable

Auto-Lite "STEELDUCTOR" Spark Plug Wire

Auto-Lite "Steelductor," a silver-sheathed high tension ignition cable, employs a seven-strand conductor of Stainless Steel, instead of the conventional strands of copper wire. Gives remarkable improvement in performance when employed in today's shielded ignition circuits.



Auto-Lite "FLEXTRAND" Primary Wire

Highly resistant to attacks of heat and oil. Auto-Lite silver-sheathed "Flextrand" Primary Wire permits easier stripping and soldering, gives long life, is easy to install.



WEN Soldering Gun Offer Breaks All Records

Still time if you act fast

Enthusiastic dealers from coast to coast are taking advantage of this outstanding Auto-Lite Wire and Cable offer. Orders have broken all records! And here's good news. There's still time to get a gun for each of

your mechanics and servicemen if you act fast. *This offer is limited* so put in your order today for the amount of wire and cable needed to get *all* the guns you can use. But act fast. The offer is limited!

Pick any assortment you want
of Auto-Lite Wire
and Cable totaling **\$29.95**

Here's how to order. Each of these nationally famous Wen Soldering Guns, carrying a list price of \$12.95, is yours for only \$4.95 when your order for the gun is accompanied by an order for \$29.95 of Auto-Lite Wire and Cable. You may order as many guns as you want . . . but each gun order must have with it an order for \$29.95 worth of Auto-Lite Wire and Cable. Figure out your order now so you get all the Wen Guns you and your men need at this low, low price. Special bonus without charge of one extra soldering tip with each gun ordered if you act at once. Call or write your Auto-Lite Wire and Cable jobber, but do it right away so you will be sure to get your guns.



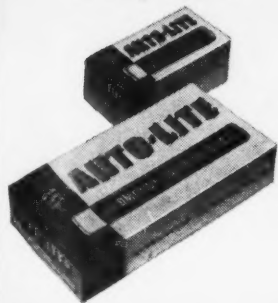
See Your Jobber Today or Write:

Merchandising Division

THE ELECTRIC AUTO-LITE COMPANY

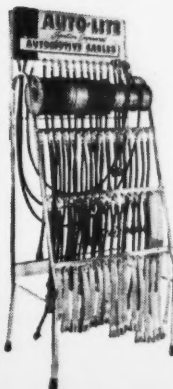
Toledo 1, Ohio

**Auto-Lite
"POWERLINE"
Battery Cable**



Auto-Lite Battery Cable, complete with the new Power Line Terminal that resists corrosion — assures excellent contact — customer satisfaction.

Backed by the greatest support in the industry!



America's only consumer-advertised wire line! The Auto-Lite name is featured in national magazines, farm papers . . . over network radio and TV. It is original factory equipment on millions of America's finest cars, trucks and tractors! Display material helps make your selling easier.

**Auto-Lite
Wire & Cable Display**

Sales-boosting display is available from jobber at special price with wire and cable purchase. Find out about free Auto-Lite signs and other point-of-sale material.

**Auto-Lite
Automotive Cables**

New Auto-Lite Battery Cable Wall Rack, 16 hooks, comes without extra cost on purchase of only \$14.95 worth of Auto-Lite Battery Cable.



**There is no substitute for
the car owner acceptance**

Raybestos enjoys

Every survey proves that more people know Raybestos than any other brand of brake lining. It's a selling advantage for you created by 38 years of consistent advertising to your customers. This year again, a hard-hitting campaign in the POST and FARM JOURNAL will urge car owners to pay just pennies more for the safer, surer stops and longer lining life provided by Raybestos PG Sets. They are factory packaged in the right combinations for every make and model of car. Use this Raybestos quality—it's backed by exhaustive Proving Ground tests—and the famous Raybestos Brake Certificate to build yourself a better, more profitable, service reputation.



LINED BRAKE SHOES or BOXED SETS
in the correct brake lining combinations for every make and model of car. Bonded or riveted. Every piece branded for your protection.

**CONSISTENTLY ADVERTISED IN THE
POST and Farm Journal**

DON'T BUY INFERIOR BRAKE LINING. IT'S DANGEROUS!

Reline with
Raybestos **PG SETS**
AMERICA'S BIGGEST SELLING BRAKE LINING



RAYBESTOS DIVISION of Raybestos-Manhattan, Inc., Bridgeport, Conn.
RAYBESTOS-MANHATTAN, INC., Manufacturers of Brake Linings • Brake Blocks • Clutch Facings • Fan Belts • Hose • Industrial Rubber Products
Rubber Covered Equipment • Asbestos Textiles • Teflon Products • Packings • Sintered Metal Products • Abrasive and Diamond Wheels • Bowling Balls



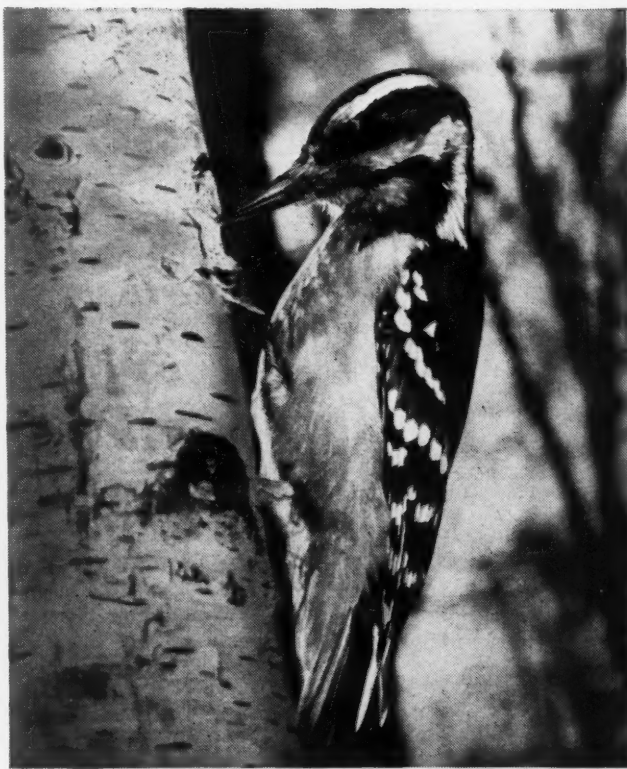
1. When a couple goes out to buy a car today, they want a lot for their family money...



2. And if the car you sell them doesn't give superior performance, you're going to be in the soup.



3. But if you want to be a man's best friend, (and woman's, too)...



4. Use your head and tell them to use "Ethyl" gasoline and get all the power they paid for. (Of course, the timing should be advanced for "Ethyl" gasoline.)



There is a difference in sealed-beam headlamps

...and this
is it →



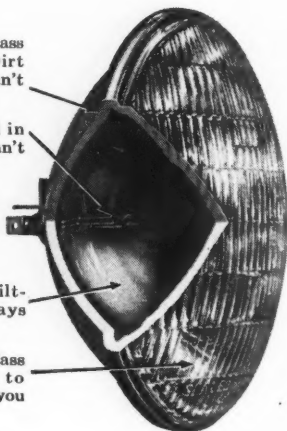
All-Glass sealed-beam headlamps do not grow dim

One-piece All-Glass construction. Dirt and moisture can't get in.

Filaments held in vise-like grip. Can't shake loose.

Mirror-like, built-in reflector. Stays bright.

Rugged, hard-glass precision lens to put light where you want it.



WHEN YOU BLOW ON YOUR GLASSES, moisture condenses on the lens. When moist air gets inside some types of sealed-beam headlamps, the same thing happens. It condenses on lens and reflector. And as the water deteriorates the reflector, the lamp grows dimmer.

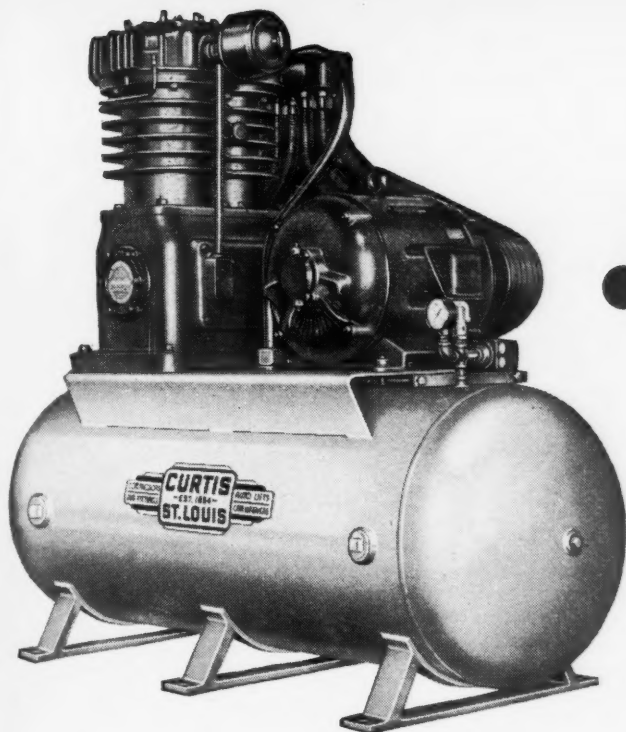
Moisture *can't* get into General Electric sealed-beam headlamps because they're All-Glass and all one big bulb. Tests show they average 99% as much light after years of use as when new.

MAKE EXTRA DOLLARS FROM FALL CHANGEOVERS

Check all the lamps on the cars you service. It's easy, takes only a few minutes—and pays off in profitable sales of G-E headlamps, tail lamps, dash and dome lamps. Surveys show 1 car out of 3 needs at least one lamp replaced. You're sure of satisfied customers when you recommend and install G-E lamps.

You can put your confidence in—

GENERAL  **ELECTRIC**



- PLENTY OF AIR
- LOTS OF PRESSURE
- AUTOMATIC!

**78 Cubic Feet Capacity
Delivered to You Ready to Run!**

Just: ● Oil motor bearing
● Put oil in crank case
● Connect to your current

Curtis 15 H.P. AIR COMPRESSOR

TWO-STAGE, AIR-COOLED

Delivers more air per horsepower, assuring saving in power bill.

INTERCOOLER

Four section, finned, providing unusually effective cooling between stages; located in cyclone of air from flywheel.

SELF-OILING

Simple, positive centro ring method; provides pressure lubrication of connecting rod and piston pin bearings.

TIMKEN MAIN BEARINGS

Tapered rollers; easy external adjustment without dismantling compressor.

VALVES

Readily removable as assembled units without removing cylinder head or breaking pipe connections or gasket joint.

AUTOMATIC START AND STOP CONTROL

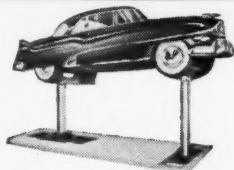
Motor protected by dependable vacuum type starting unloader.

AIR TANK

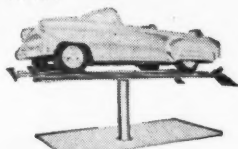
120-gallon, 200-pound pressure, built to ASME standards; automatic electric weld.

PRECISION WORKMANSHIP

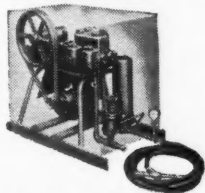
Backed by almost a century of manufacturing experience — to assure you dependable, trouble-free service.



**CURTIS FULL HYDRAULIC,
TWO-POST SHOP LIFT**
—for Passenger Cars and
Light Trucks



ALSO, Single post rotating lifts for
passenger cars and light trucks.



HYDRAULIC CAR WASHER
(300 Pounds Pressure)
—for better and faster car washing.
More cars washed each day
mean more profit for you.

CURTIS PNEUMATIC MACHINERY DIVISION

of Curtis Manufacturing Company
1946 Kienlen Avenue • St. Louis 20, Mo.

CURTIS PNEUMATIC MACHINERY DIVISION
of Curtis Manufacturing Company
1946 Kienlen Avenue, St. Louis 20, Missouri

CM-727

I am interested in items checked:

☐ AIR COMPRESSORS ☐ AUTO LIFTS (Single Post) ☐ Two Post
☐ POWER CAR WASHERS

Name.....

Firm.....

Street.....

City.....Zone.....State.....

Man, it sure pays to b highest "I.Q."*



ORDINARY OPEN-END — Blunt nose and big head can't work in-close. A $\frac{3}{8}$ " WEDG-HEAD jaw is as small as the thinnest ordinary $\frac{9}{16}$ " open-end.

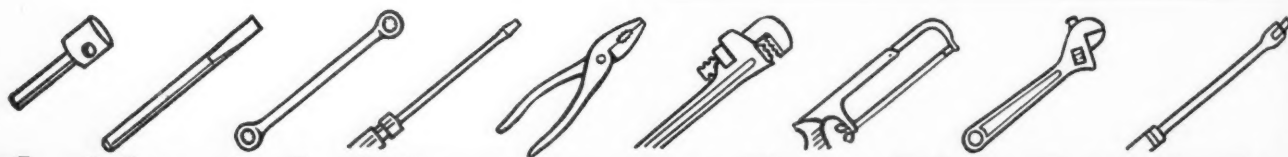
WEDG-HEAD has tapered jaw — you'll work better on straight pulls or at any angle.

HOLLOWED DOME gives you full jaw grip at all angles from best working position. No more skinned knuckles.

NARROWER HEAD — STRONG, TAPERED JAWS "find" nuts faster. Greater gripping area stops burring.

VARIABLE CONTACT ANGLE — You take solid bites on hidden or thin square or hex heads... then slip out faster. Get extra clearance.

Get your WEDG-HEADS at leading tool stores NOW — They're available in these popular automotive size combinations: $\frac{7}{16}$ " x $\frac{1}{2}$ ", $\frac{9}{16}$ " x $\frac{3}{8}$ ", $\frac{3}{4}$ " x $\frac{7}{8}$ ".



Blackhawk builds a complete line of hand tools for

buy the tools with the



...another example of how Blackhawk Tools give you more "IDEA QUALITY"*

Tools, like people, have an "I.Q." rating. And in tools, "I.Q." stands for "Idea Quality" — the built-in bonus that lets you do more work ... faster and easier. Blackhawk tools not only have advanced design — they also combine such factors as improved metallurgy and superb finishes to assure longer tool life. Take WEDG-HEADS, for example ...

Here's the most sensational new idea in open-ends in 100 years! WEDG-HEAD'S revolutionary tapered jaw goes where other open-ends can't — gives you sharper "bite" at any angle. It's typical of more than 1000 Blackhawk Tools that put their users way out on top!

Buy Blackhawk Tools from your leading jobbers, implement dealers, hardware and other tool stores. You'll find it pays to buy tools with the highest "I.Q." And, mister, that's Blackhawk! Blackhawk Mfg. Co., Dept. W613, Milwaukee 1, Wisconsin.

BLACKHAWK®



the mechanic's full requirements



To get **MOST** for your money — look for tools with the **SERVICE-PROVED SEAL**

The Service-Proved Seal is proof that every tool in this complete line is top Blackhawk quality. It is your assurance of genuine utility, unmatched design and extra stamina. Research men and mechanics have selected these tools for the Blackhawk line only after rigid lab and shop tests. You can't go wrong when you buy Blackhawk Service-Proved Tools!

Three new salesmen for AC Products:

1. **THE ONLY
SPARK PLUG**
WITH
PATENTED
CORALOX
INSULATOR

*Equipment on
nearly as many
new cars as
all other makes*

AC
**SPARK
PLUGS**



AC is providing its Retailers and Wholesalers with these attractive cut-out advertising displays. Check with your AC field man to make sure you have your copies — they will help to step up sales of the AC Products which you handle.

AC SPARK PLUG DIVISION



GENERAL MOTORS CORPORATION

2.



Make the most
of their
money-making
messages!

OIL SERVES YOU—

AC

**KEEP IT
CLEAN**

**OIL
FILTERS**

WITH
ALUVAC
ELEMENTS

**FUEL
PUMPS**
Wear Out Too!



AC

**FUEL
PUMPS**

REPLACE WITH
**America's
First and Finest**

3.

Display them
where every
customer will
see them!



Replace—

WORN CARBURETORS with a NEW STROMBERG *The Quality Carburetor*

Saves you time

That's a fact! By installing brand new Stromberg* replacement carburetors, you save plenty of time because your trained mechanics aren't bogged down doing time-wasting repairs. And installing a Stromberg is so fast and easy! No special skill or equipment is needed. Just follow the instructions on the installograph included with every unit. The small, simplified stock eliminates thousands of repair parts. For example, you need carry only *four* Stromberg models to replace the carburetor on any Chevrolet car or truck built since 1932. And that's not all—by selling new Stromberg replacement carburetors, you eliminate trade-in troubles and simplify bookkeeping problems. Start now to replace instead of repairing—the profitable new idea made possible by the exclusive streamline Stromberg plan.

*REG. U.S. PAT. OFF.

Saves your customers money

This is a fact they'll be interested in! You can sell your customers a factory-new Stromberg replacement carburetor for about as much as *temporary* repairs on his old carburetor. A 20% saving on the yearly gasoline bill—easily possible with a Stromberg carburetor—will more than cover its cost.



Special Starter Stock Offer

Cash in on the Stromberg plan today! Find out how little a starter stock costs covering most models of Ford, Plymouth and Chevrolet. Send for the facts about this streamline, profit-making plan—or see your jobber.



Replacement
Carburetors—
Repair Kits



Hydrovac* Power
Brake—Trailer Power
Braking Systems



Original
Equipment
on most cars



Cold Immersion
Parts Cleaner saves
time and money

Bendix SOUTH BEND
PRODUCTS DIVISION INDIANA

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.
Canadian Sales: Bendix-Eclipse of Canada, Ltd., Windsor, Ontario, Canada



Build your reputation for brake work! Use Grey-Rock Balanced Braksets

ASK YOUR JOBBER
ABOUT
GREY-ROCK
FACTORY BONDED
SHOE EXCHANGE



Every segment factory-branded for your customer's protection. For riveting or for bonding.

Only **Grey-Rock** *makes*
BALANCED BRAKSET LININGS



GREY-ROCK DIVISION of Raybestos-Manhattan, Inc., MANHEIM, PA.

RAYBESTOS-MANHATTAN, INC., Manufacturers of Brake Linings • Brake Blocks • Clutch Facings • Fan Belts • Radiator Hose • Packings • Mechanical Rubber Products • Rubber Covered Equipment • Asbestos Textiles • Sintered Metal Products • Abrasive and Diamond Wheels • Bowling Balls

Chilton's MOTOR AGE, JANUARY, 1953

Grey-Rock advantages

Reputation Booster



Your reputation for good brake work climbs higher every time you install Grey-Rock Linings . . . the linings regularly advertised for years. Car owners know the Grey-Rock name, and have greater confidence in shops that use Grey-Rock.

Satisfied Customers



Because each Grey-Rock set is a *balanced* combination of friction materials especially selected for some particular make and model of car, your customers get faster, smoother, safer stops . . . with longer wear and fewer adjustments. You're sure of these advantages when you use Grey-Rock; but you never know what you're getting when you accept unbranded lining!

Proof of a Better Brake Job

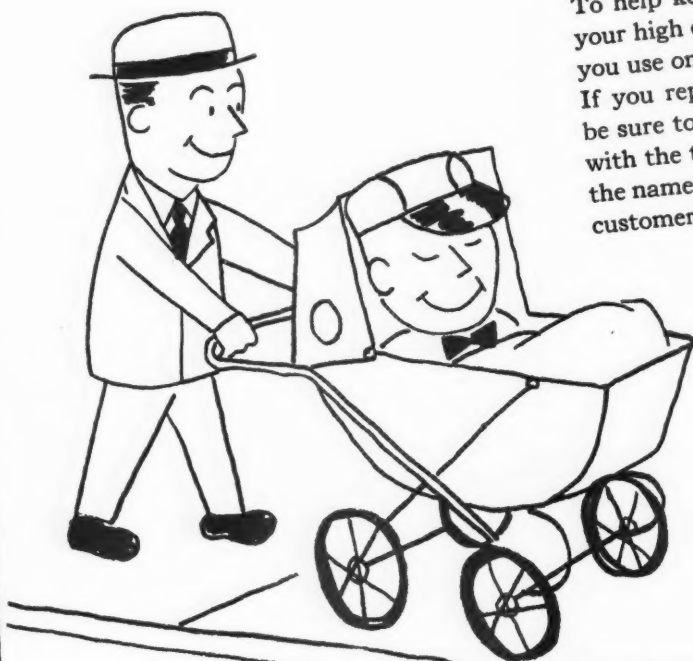


This tag is packed in every Grey-Rock set, ready for you to snap onto a dash button of your customer's car. It tells how your workmanship joins with Grey-Rock Balanced Braksets to deliver a better brake job. It's good advertising for your shop!

Consistently advertised in

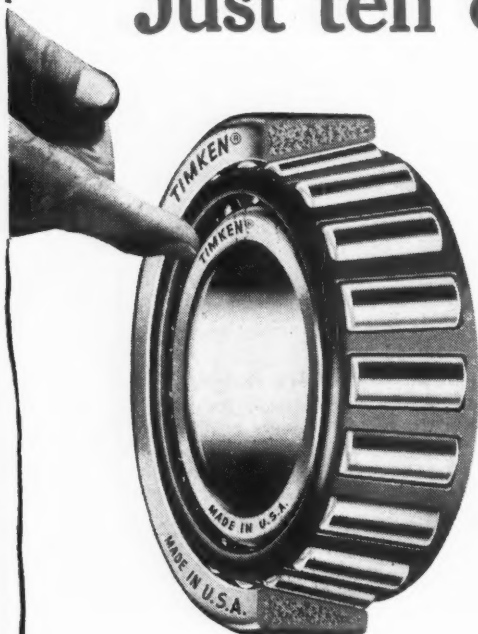
POST and **Country Gentleman**

Want to be your customer's pride and joy?



To help keep customers boasting about your high quality service, let them know you use only the best replacement parts. If you replace a tapered roller bearing, be sure to do it with one that's stamped with the trade-mark "Timken®". That's the name that stands for quality in every customer's mind.

Just tell 'em it's "TIMKEN®"



TIMKEN tapered roller bearings have advanced design, are made of Timken fine alloy steel, are manufactured to extreme limits of precision and have their quality controlled at every step of production. That's why leading makers of cars, trucks, busses and tractors use Timken bearings for original equipment.

Over 50 years of bearing research and development have made Timken bearings the best bearing you can use for replacement. And be sure to show your customers the trade-mark "Timken". **FREE BOOKLET!** Send today for "Timken Tapered Roller Bearings, Their Care and Maintenance" to Dept. AM-1, The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN **TAPERED ROLLER BEARINGS**

TRADE-MARK REG. U. S. PAT. OFF.

NOT JUST A BALL  NOT JUST A ROLLER  THE TIMKEN TAPERED ROLLER  BEARING TAKES RADIAL  AND THRUST  LOADS OR ANY COMBINATION 

HOLLEY
Offers the
No. 85R-300
All Ignition
Dealer Stock

Net Cost: \$26.72*
You Get: Stock, display rack, price list, condensed salesman's catalog, and authorized dealer decal.
Your Profit: \$17.82

RT-16

The New Holley Original Equipment Ignition Merchandiser Gives You Only Fast-Moving Component Parts

There are nearly 14,000,000 Holley equipped cars and trucks on the road. That's a ready-made market for you. And now—for the first time—Holley invites you to become an authorized Holley dealer by stocking just \$26.72 (your net price) worth of the fastest-moving ignition parts in the Holley original equipment line.

Selected after a careful survey of rapid turnover ignition parts, the Holley Ignition Merchandiser includes such items as: caps, rotors, condensers, coils, diaphragms and contact sets for 8-cylinder Fords and late model Lincolns and Mercurys as well as 6-cylinder Fords and Ford Trucks.

As an authorized Holley dealer, you get the same discount on the entire line of fuel and ignition parts . . . and you receive up-to-

the-minute service and catalog information direct from the factory.

SEE YOUR HOLLEY DISTRIBUTOR

HOLLEY
Carburetor Co.

5930 VANCOUVER AVENUE • DETROIT 4, MICHIGAN

FOR MORE THAN HALF A CENTURY—
ORIGINAL EQUIPMENT MANUFACTURERS
FOR THE AUTOMOTIVE INDUSTRY

LET'S SET THE RECORD S



Recently a well known Spark Plug Manufacturer ran several trade advertisements, addressed to Jobbers and Dealers, in which they indicated surprise that another Spark Plug Manufacturer was claiming credit for PIONEERING the Resistor-Type Spark Plug. Obviously, the reference was to Auto-Lite—SO LET'S SET THE RECORD STRAIGHT.

In December, 1947, Auto-Lite introduced the Auto-Lite Resistor Spark Plug with this prediction . . . "Widespread applications may be expected in the near future, so definite are the improvements this development makes in radio suppression as well as in engine performance and economy."

In 1948, leading car manufacturers adopted Auto-Lite Resistor Spark Plugs as original equipment . . . making the Auto-Lite Resistor Spark Plug the first Resistor-Type Plug to be adopted as original equipment in the automotive industry. This was one of our claims.

In 1950 we said, "Auto-Lite leads with the Resistor Spark Plug; others will follow."

Now in 1953, it's no secret that others have followed the lead established by Auto-Lite. No one has challenged the advantages derived from built-in resistor construction in a spark plug, nor can anyone disprove the claims we make, such as Smoother Performance, Quick Starts and Double Life.

Not long ago, one of our advertisements was headed—
"A PREDICTION THAT CAME TRUE". It set forth
the facts outlined above. Is there any doubt about it?

.....

Auto-Lite Makes a Complete Line of Spark Plugs Including

STRAIGHT... ABOUT

Resistor Spark Plugs

.....

IN THE CASE of aircraft engines, spark plugs with built-in resistors have been used for many years. Auto-Lite has manufactured a great number especially for the government. Engineers know the Resistor feature was applied primarily because of increased gap life and overall performance rather than the suppression of radio interference, as inferred.

Reference was made also that one of our original equipment customers whose engines are being used for racing in Europe was not using Auto-Lite Spark Plugs. The facts are that these engines, rated at 180 H.P., have been modified by the purchaser (not the manufacturer) to develop 300 H.P. Auto-Lite does not offer for sale or otherwise make available *Special* Spark Plugs designed for racing; therefore, it is obvious that the owners of these *Special* Engines would be compelled to seek another source —LET'S SET THE RECORD STRAIGHT.

Our advertising will never make false claims. Before it is released, approval is necessary by responsible people including our Engineering Department. We are manufacturers of the complete Ignition System and the development of Resistor-Type Spark Plugs for automotive use is just one more contribution to a vast and ever-growing industry.

THE ELECTRIC AUTO-LITE COMPANY

Toledo, Ohio

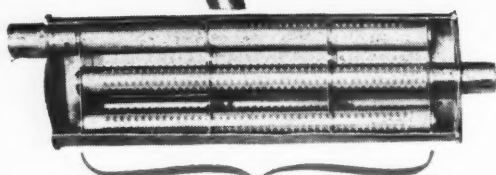
Merchandising Division

Toronto, Ontario



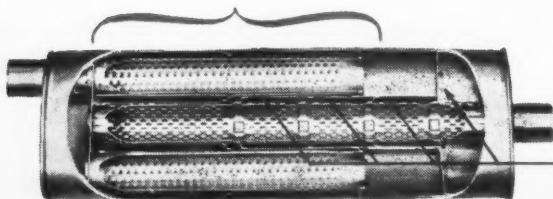
.....

Resistor, Standard, Transport, Marine and Aircraft.



TRI FLOW

"Reverse Flow" gives
Note Reducing Action

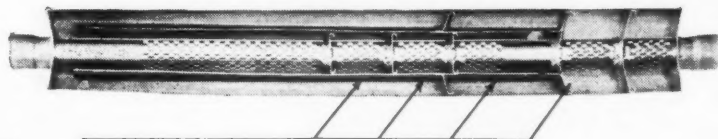


"Combined Action" Design

THE PROBLEM OF TAIL PIPE BARK

Heavier explosion pressures of new high horsepower engines and V-8 dual manifolding greatly increase the severity of "Tail Pipe Bark." Walker "Precision Tuning" meets and solves this new problem.

In "Direct Flows" by the use of special filtering chambers. In "Tri-Flows" through Walker "combined action" design which brings together the superior "spit-reducing" characteristics of "straight-thru" design with the superior note reducing qualities of tri-flows.



DIRECT FLOW

Special "Straight Thru" Roughness Control Chambers—advanced application in Tri-Flows to control Tail Pipe "Bark"

NOW MORE THAN EVER
WALKER SILENCERS
MAKE THE DIFFERENCE!

"INDIVIDUAL TUNING"

For the Millions of Fine Automobiles,
Trucks and Buses in Active Service.

"PRECISION TUNING"

For the New Generation of Engines and
Automobiles—Now and to Come.

Horsepower is on!

... AND WITH IT COMES "PRECISION TUNING"

**A NEW GENERATION OF
WALKER SILENCERS
TO MEET THE NEW AND MORE COMPLEX
PROBLEMS OF A NEW GENERATION
OF ENGINES AND AUTOMOBILES**

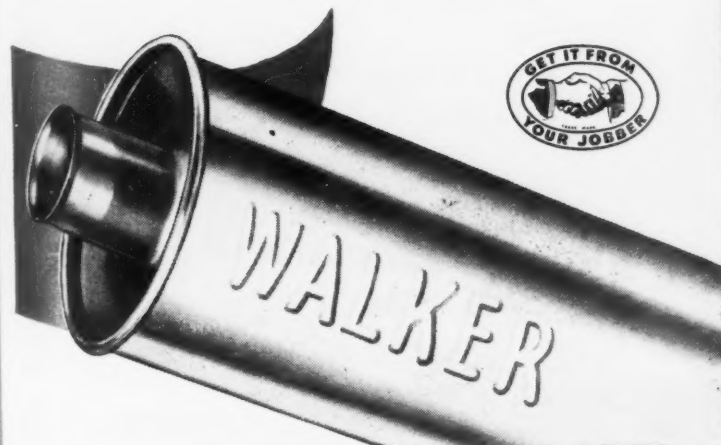
● Improperly designed mufflers are horsepower thieves! No longer can yesterday's mufflers meet even the minimum requirements of today's new standards of car performance and engine design. More powerful engines . . . greater horsepower . . . more intense explosions mean heavier power notes . . . greater "tail pipe bark" . . . greater muffler body and exhaust pipe noise . . . greater volume of exhaust gases. More automatic operation and increased flexibility through automatic transmissions mean more critical power note peaks through "accelerating-to-cruising" range of operation. Greater economy and quieter, smoother ride mean more rigid back pressure limitations . . . more rigid acoustical specifications.

There is no single solution such as "trick shell construction" to these new and complex problems. Exhaust system design is now an integral part of engine design . . . and must comprehend and successfully meet the entire broad front of new engine performance.

To meet these new requirements, Walker now offers a new and advanced concept which brings the exhaust system into its true position as a specific engine part—*Precision Tuning*—a new generation of Walker Silencers for the new generation of engines now—and in the years to come—with Walker "Individual Tuning" . . . for the millions of "other generation" vehicles now in service.

WALKER MANUFACTURING COMPANY OF WIS. • RACINE, WIS.

Exhaust Silencers • Jacks • Lifts • Oil Filters



**PRECISION TUNING
GIVES CAR OWNERS WHAT THEY WANT!**

✓ **MORE available power!**

✓ **LESS back pressure!**

✓ **MORE traffic get-away!**

✓ **LESS noise!**

TO THE TOP

R. A. STRANAHAN, President
F. D. STRANAHAN, Treasurer

CABLE ADDRESS:
"CHAMPION"

CHAMPION SPARK PLUG COMPANY

FELTHAM, ENGLAND PARIS, FRANCE WINDSOR, CANADA

TOLEDO 1, OHIO, U.S.A.

January 1st, 1953

Dear Champion Dealer:

Our plans are all set to make 1953 your biggest year for spark plug sales and profits.

We are kicking off with these two new tools that will be of tremendous help in selling your customers.

The first is a new and substantially improved spark plug firing indicator. This tool has a sharp needle point for piercing without damage the rubber plug-covering umbrellas, now standard equipment on some cars. This enables you to test these plugs without removal of the umbrellas. When testing plugs without umbrellas, a protective metal cup covers the needle.

The second is a Spark Plug Viewer. Extensive tests in the field have proved very successful. Combining a powerful magnifying glass and a flashlight with a bull's-eye type bulb, the Viewer permits a critical inspection of both the electrodes and firing end of the insulator.

Here are two selling tools that will enable you to sell any customer who needs spark plugs.

Cordially,

Jim L

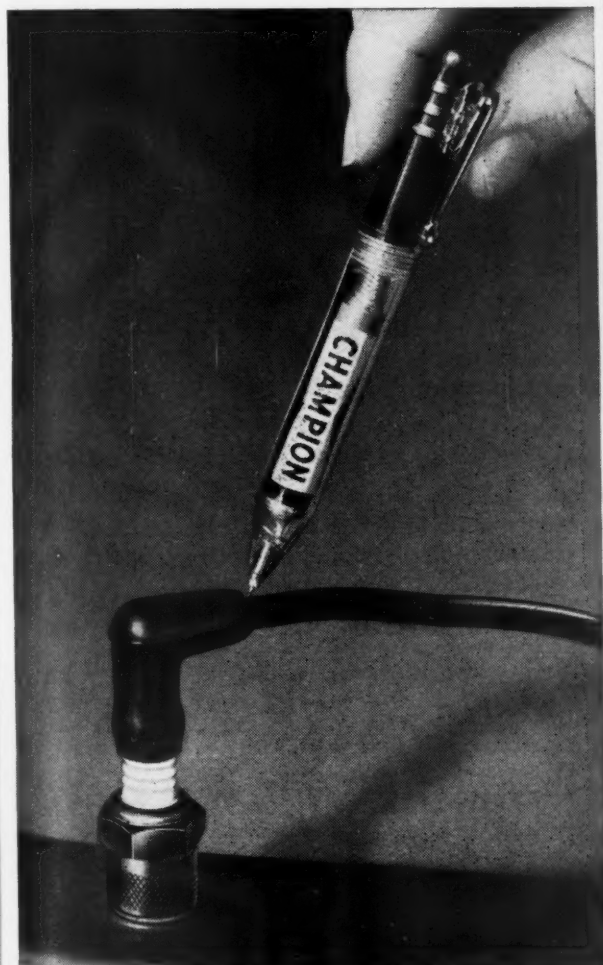
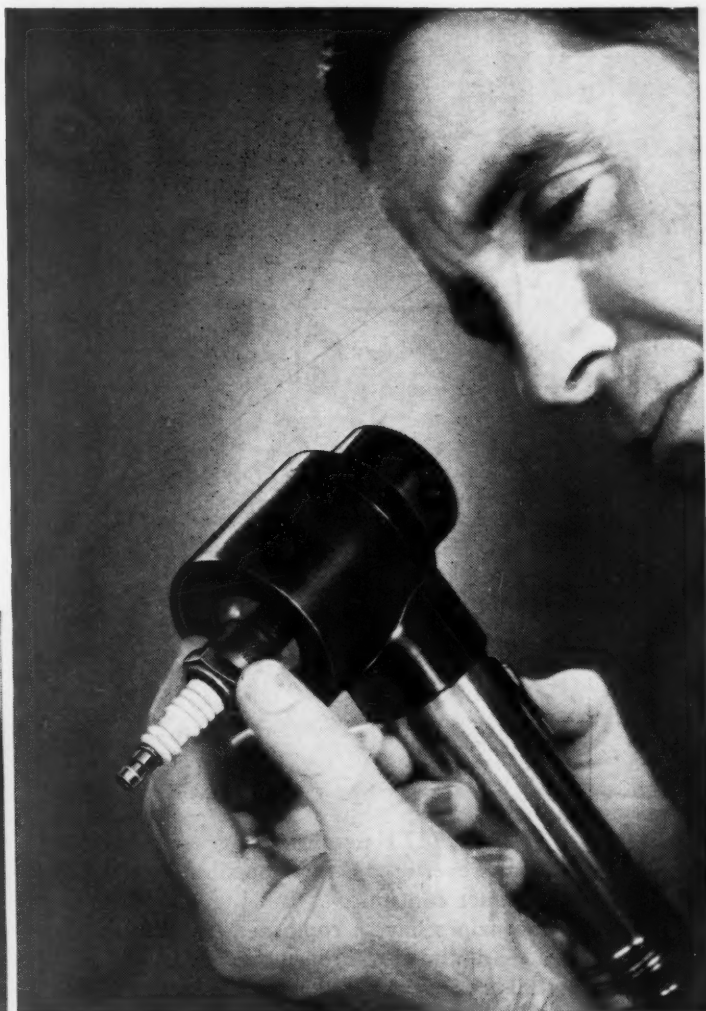
P.S.: We've just read an interesting article in "Motor Trend" about Roger Walcott's new car that achieved a lap speed of 137 mph at Indianapolis. We quote from the magazine, "Throughout the entire test period the Chrysler-powered racer has been driven 356 laps, including 40 laps to run in a new engine. All were at high speeds except during the break-in period! Yet it was not forced to change plugs, using Champion NA 19 on all speed runs."



DEALERS **IN THE NATION**

NEW SPARK PLUG VIEWER

Permits close examination of fuel deposits over the entire length of the insulator nose. Detects cracked or chipped insulators and condition of electrode sparking surfaces. Dramatizes need for replacing worn out spark plugs.



NEW SPARK PLUG FIRING INDICATOR

Provides a fast, simple and effective check of voltage being supplied to the spark plug. Will not damage the rubber umbrellas covering plugs and may also be used on plugs without umbrellas. Gives a quick, definite clue to spark plug and ignition cable condition.

Wagner offers a

to



SELL SAFETY to your customers—and you'll sell more safety service, at greater profits, than you've ever thought was possible. Your Wagner jobber will help you. So will Wagner. In 1953, Wagner continues to run big, colorful ads in POST and COLLIER'S. (These two national magazines have a combined circulation of over *seven million* copies per issue.) The Wagner ads are aimed to arouse car, truck, and bus owners into action by reminding them — "Nearly 100 people are killed every day as the result of automobile accidents . . . Will you, and loved ones be next—due to your neglect?"

Brake systems should not be neglected . . . good brakes stop wasting lives.

Act now to tie in with this program. There's a Wagner Jobber near you who can supply you with genuine Wagner Lockheed Hydraulic Brake Parts and Fluid, and Wagner CoMaX Brake Lining. Through him you also get Wagner posters, streamers, circulars, mailing cards and other advertising material to help you sell more brake system service.



Wagner

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • NoRel • CoMaX BRAKE LINING • AIR BRAKES

a complete program increase your sales



You can depend upon WAGNER QUALITY because Wagner Products are used as original equipment by truck, bus, and car manufacturers.



Wagner Electric Corporation

6498 PLYMOUTH AVENUE, ST. LOUIS 14, MO., U. S. A.
(BRANCHES IN PRINCIPAL CITIES AND IN CANADA)

*...the best known
name in brake service*

Please send me the latest Bulletins on Hydraulic
Brake Servicing—HU-17H, HU-197.

NAME _____

FIRM NAME _____

ADDRESS _____

CITY _____

ZONE _____

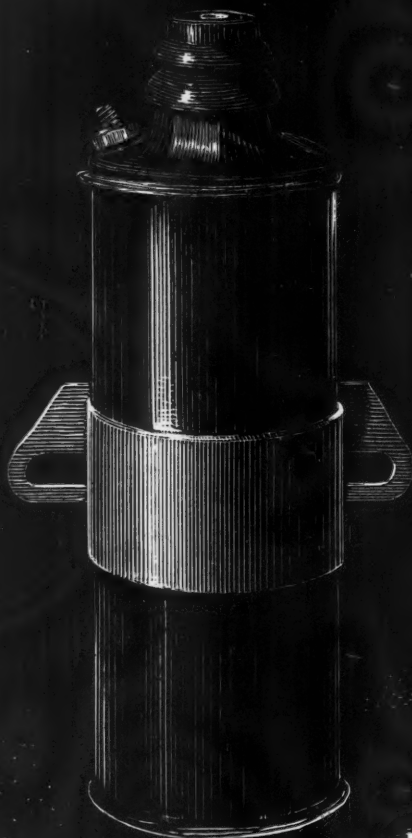
STATE _____



A53-1

PHOTOGRAPHS • ELECTRIC MOTORS • TRANSFORMERS

INDUSTRIAL CRANE BRIDGE BRAKES



ANOTHER ONE OF BLUE STREAK'S
36,000 BOOSTERS!

When we say this Blue Streak coil and the connection it makes is *waterproof*, we mean you can even submerge it in a fish bowl full of water, turn on the juice, and it won't bother the coil *or* the fish. (You can see why this coil will never fail whether in a driving rainstorm, on a flooded road or under high humid conditions.)

The three-tiered pagoda top protects the coil against surface leakage or flash-over of high-tension current.

Ask for Blue Streak the next time you order coils—as well as the other premium-grade Blue Streak parts. *Standard Motor Products, Inc., Long Island City 1, New York.*

*Better your Business...
Buy Blue Streak*



"I put a Blue Streak coil on one of our town's fire trucks 18 years ago after four other coils had failed. That coil is still being used today!" This amazing report comes from Warren Voyles, shown here with his son Edson at their big tune-up shop in Conway, Louisiana.



COILS • POINTS • CONDENSERS • VOLTAGE REGULATORS • HEADLIGHT RELAYS • DISTRIBUTOR HEADS & ROTORS • DIMMER SWITCHES • WIRE & CABLE

NEW...for PROFITS



in Automatic Transmission Service!

Model 60034-3 Dispenser for 100 lb. drums... includes dolly, filter, 7 ft. hose, nozzle, pump and totalizing quart meter.



Model 60034 Pail-Type, 30 lb. capacity... has totalizing quart meter, 7 ft. hose, flexible nozzle.



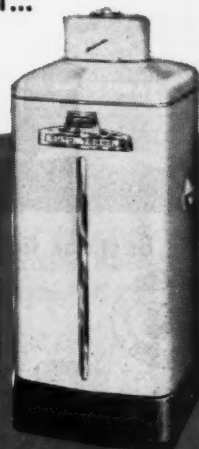
Model 60084 Challenger for 100 lb. drums... matches other Aro Challenger Cabinet units... has totalizing quart meter, filter, 7 ft. hose, flexible nozzle, dolly.



Model 60004 Drum-Cover Type for 100 lb. drums; has non-totalizing pint meter, 7 ft. hose, flexible nozzle, dolly.



Model 60025 DeLuxe for 100 lb. drums... handsome square cabinet matches Aro's DeLuxe line... has totalizing quart meter, filter, pump, 7 ft. hose, nozzle and dolly.



Everything YOU NEED

Now—ARO helps you cash in on fast-growing demand for automatic transmission service! These new Aro Dispensers do the job clean and fast... producing *steady profits!*

All Aro Dispensers meet car makers' and oil companies' strict demands for clean fluid dispensing... *fluid filter* located behind nozzle, close to point of delivery, can be disassembled for cleaning... *strong flexible metal nozzle* services all makes of automatic transmissions without use of adapters; no-drip tip... *totalizing quart meter* has 16-qt. dial with two indicators, full quarts or fractions of quarts... name plate identifies fluid in unit... Aro-built dependability. See your Aro Jobber. Write for new bulletin.

The Aro Equipment Corp., Bryan, Ohio
Aro Equipment of Canada, Ltd., Toronto, Ont.

ARO

LUBE EQUIPMENT

Also...GREASE FITTINGS...AIR TOOLS
...HYDRAULIC EQUIPMENT...
AIRCRAFT PRODUCTS



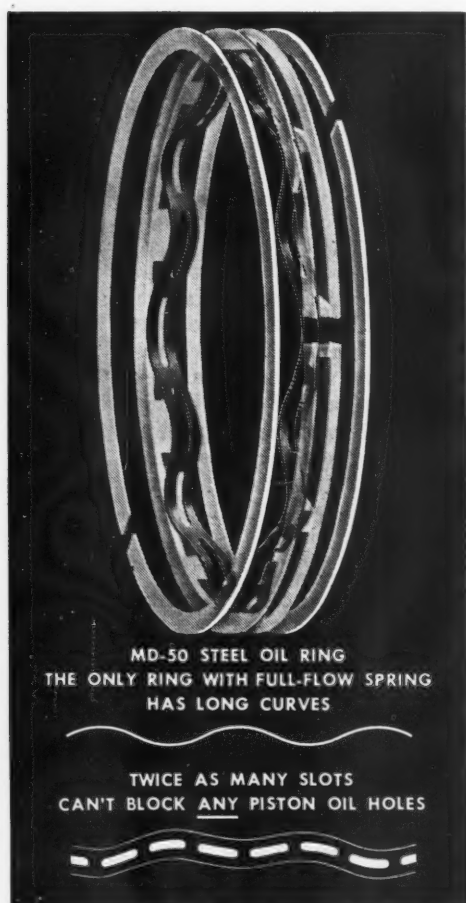
It's the



CHROME

that makes them

• **Start Easier!** • **Work Better!** • **Wear Longer!**



Sealed Power Kromex

FULL-FLOW RING SETS

- 1 Top compression ring is chrome-alloy cast iron with **SOLID CHROME** face, factory-lapped to a light-tight finish. Means more power, longer life.
- 2 Side rails of MD-50 oil ring have **SOLID CHROME** faces, Granosealed sides for flexibility. Hundreds of thousands of cars have proved this ring best for oil control even in badly tapered and out-of-round bores.
- 3 All rings are beveled or tapered to thread-line contact for quick seating and blow-by control.

Best for fighting Heat, Friction, Corrosion, Abrasion in late-model cars and trucks



SEALED POWER CORPORATION, MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST IN NEW CARS! BEST IN OLD CARS!

Chilton's

MOTOR AGE

JANUARY 1953



An *Editorial*

"I've Got ASIdeas for You!"

"HOLD IT! I'm the Man with a Mission. I'm your jobber's salesman—sparked and enthused—stirred up by what I've learned at the Automotive Service Industries Show in Atlantic City. I've got ASIdeas for you!

"Actually, these ASIdeas are competitive profit opportunities for Motor Age readers. The ASI Show was held for manufacturers and wholesalers—my

mission is to bring their ideas home to car dealers and independents, right now! My catalog is loaded with good news for better profits in the competitive sales year of 1953.

"Yes, 1953 will be a competitive year.

To get your share of the service business this year, take hold of the opportunities shown on the following pages. Read 'em and reap."



Frank P. Tighe

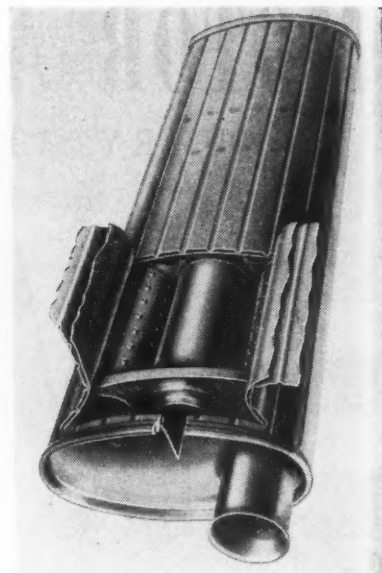
EDITOR

A S Ideas



for You

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▼ 1. Body Jack

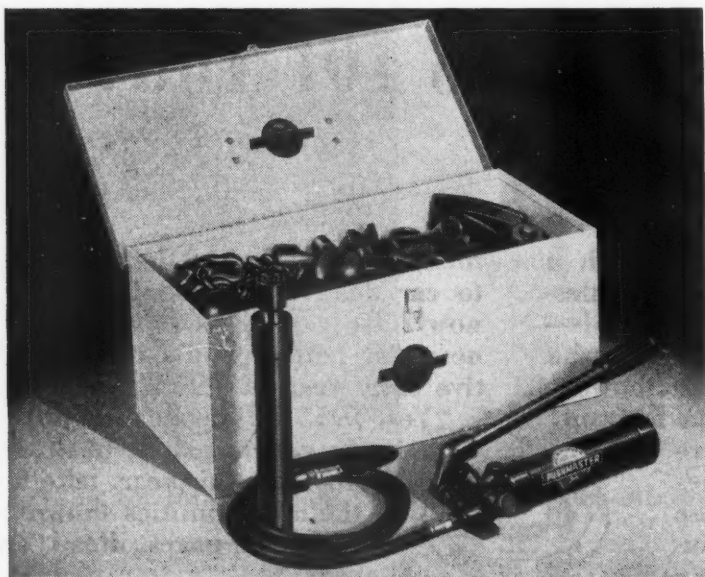
The Hein-Werner Corp.: The new Pushmaster Model F-4 remote control single acting hydraulic jack for body and fender work exerts a maximum 4 tons of pushing power. The ram retracts automatically when released. The ram weighs only five pounds, measuring 10 inches overall when closed and 15 inches when extended full length.

▼ 2. Screw Extractors

J. H. Williams & Co.: Williams announces the addition of screw extractors to their line of tools. They are claimed to be ideal for quick, easy removal of broken screws, bolts, studs or other threaded forms, without injury to the tapped threads. They are available in nine sizes, individually packaged in cardboard envelopes and in sets complete with maple block stand.

▲ 3. New Mufflers

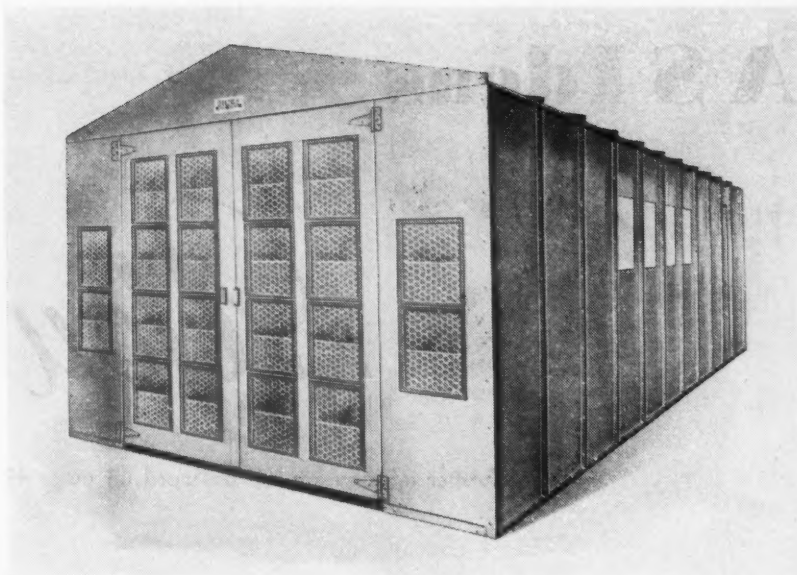
The AP Parts Corporation: Replacement mufflers with the fluted shell design are now available for additional cars with high compression engines. Engineered especially for silencing high compression engines, the muffler, instead of using a compound wrapper such as asbestos between the double shell of a muffler, use "fenced-in" air to do the work.



THESE ARE PRODUCTS DISCUSSED BY

► 4. Spray Booth

Binks Mfg. Company: The Binks DAS (Dry Automobile Standard) auto spray booths are said to provide ideal painting conditions and easy assembly. The booths incorporate provisions for eliminating dust and dirt with replaceable filters in the doors and side panels. These filters are made of spun glass coated with Viscosine, which is non-inflammable and remains fluid. The booth is shipped "knocked down" with full assembly instructions. Twenty models are available.

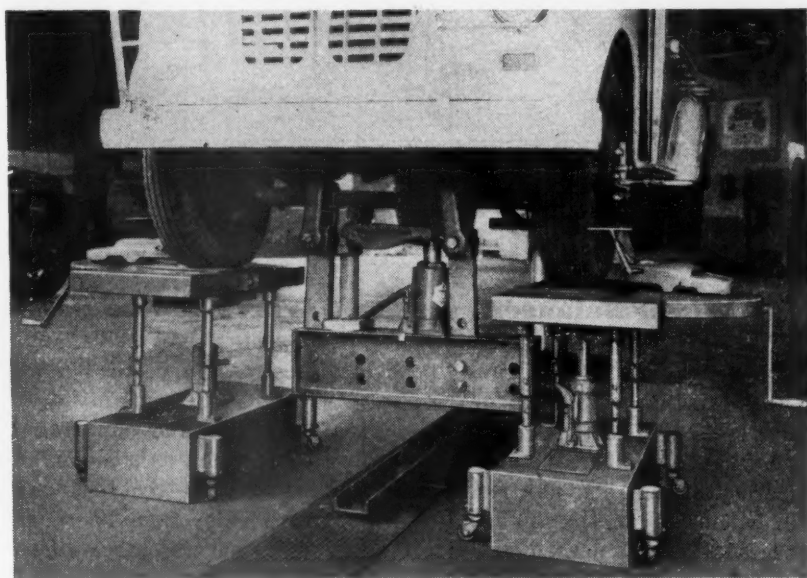


◀ 6. Tire Chains

Round Chain Co.: Minit-On is a new type passenger car chain which can be applied to the wheel in sixty seconds without moving, getting under, or jacking up the car. It is a complete tire chain with a two-piece semi-rigid cable with two positive locking fasteners which replace the usual inner side chain. This cable permits the chain to be applied quickly, even when the car is on a hill, ice or snow.

► 5. Wheel Aligner

Manbee Equipment Division: A heavy duty portable Dyn-A-Liner unit has been announced by the Manbee Equipment Division. Used with any two post or portable lift, the Dyn-A-Liner stands support the front wheels as well as toe gage and turning radius gages. The roller heads revolve the wheels for checking alignment with wheels in their true road position with Manbee alignment camber, caster and king pin inclination gages. These units are said to provide ideal working height for aligning wheels on trucks and buses.



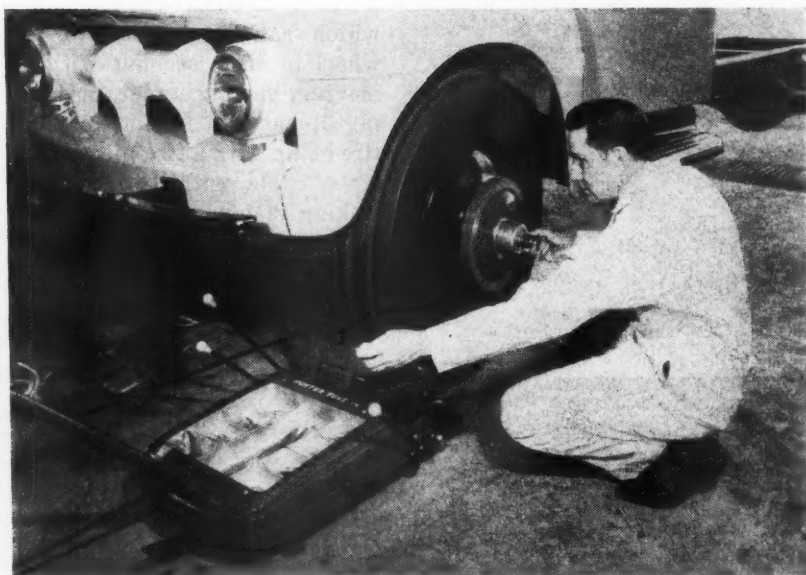
Y MANUFACTURERS AND JOBBERS AT THE ASI SHOW

A S Ideas



for You

For further information use postcard on page 49



▲7. Wheel Balancer

Hunter Engineering Company: The Hunter Tune-In Wheel Balancer with heavy duty truck spinner, is the newest addition to the Hunter line of balancer equipment. The new model will balance $\frac{1}{2}$ to $1\frac{1}{2}$ ton truck wheels as well as passenger car wheels.

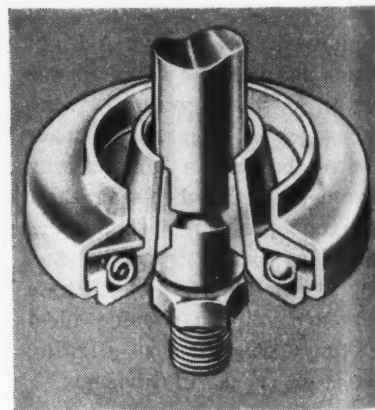
►8. Valve Rotators

Thompson Products, Inc.: Special attention in 1953 is being given to the acquainting of repairmen with the importance of valve rotators as a means of eliminating valve troubles, and increasing valve life. The company manufactures three different rotating mechanisms.



▲9. Spray Gun

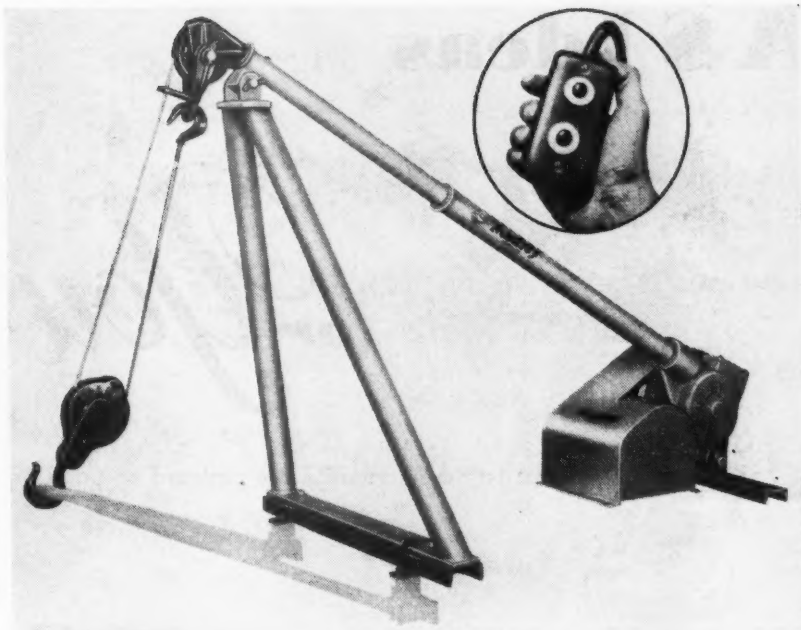
DeVilbiss Company: A new spray gun with sensitive controls for fine spraying is available from DeVilbiss. The gun, designated as Type EGA, is designed for small refinishing jobs, stenciling, blending, highlighting, and decorative work. Its pattern is medium size and can be adjusted to practically pin-point size for touch-up work. The spray gun body is an aluminum dye casting.



THESE ARE PRODUCTS DISCUSSED BY

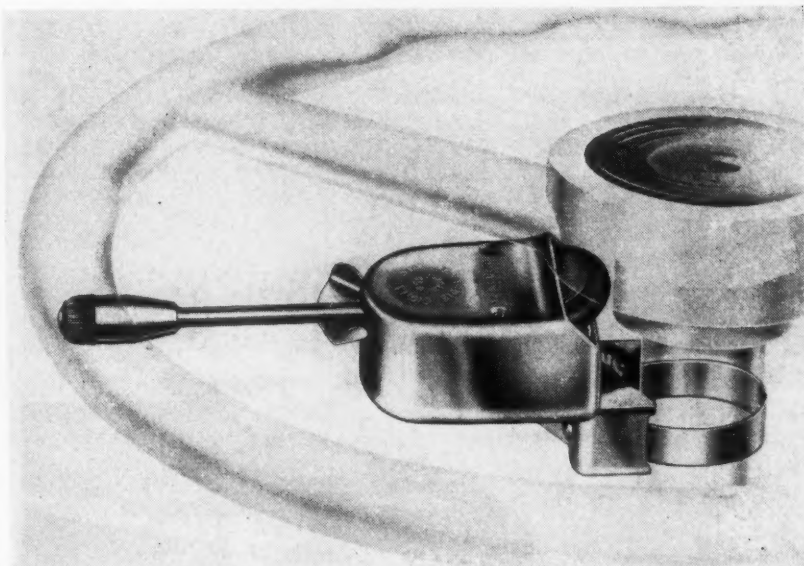
► 10. Crane Drive

Manley Div. of American Chain & Cable Co., Inc.: The new Manley PD-3 electric power drive is a completely enclosed power drive unit connected to its push button control box by a long, flexible cable. Designed for use with the WC-3 and WCJ-3 wrecking cranes, it converts them from hand operation to electric power operation. The push button control box can be carried by the operator to best control position for individual jobs or can be permanently controlled to a convenient place at the rear of the truck.



► 11. Turn Signal Set

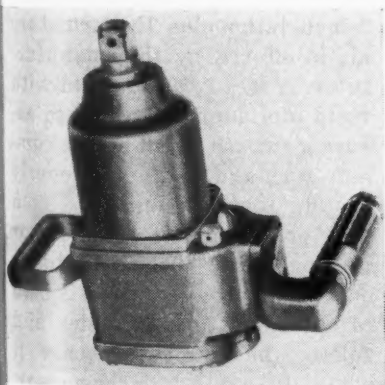
Signal-Stat Corp.: The new Sigflare Autoret directional signal switch has a self cancelling action and offers a safety feature in the flashing of all four signals at one time if the motorist should require a flare type signal. The unit is designed with an adjustable clamp to fit numerous steering columns and comes in either chrome plated or soft-tone painted finish.



◀ 12. Impact Wrench

Chicago Pneumatic Tool Company: The CP-790 Air Impact Wrench, rated to 1 1/4 inch bolt size, is designed to fulfill the heavy nut and bolt running requirements of truck operators. It is available with standard or six inch extension drive shanks,

and is furnished with a detachable angle head for close working quarters. Power is said to be fully controllable. Twenty possible handle combinations enable the operator to get the best handling qualities under all job conditions, according to the manufacturer's report.



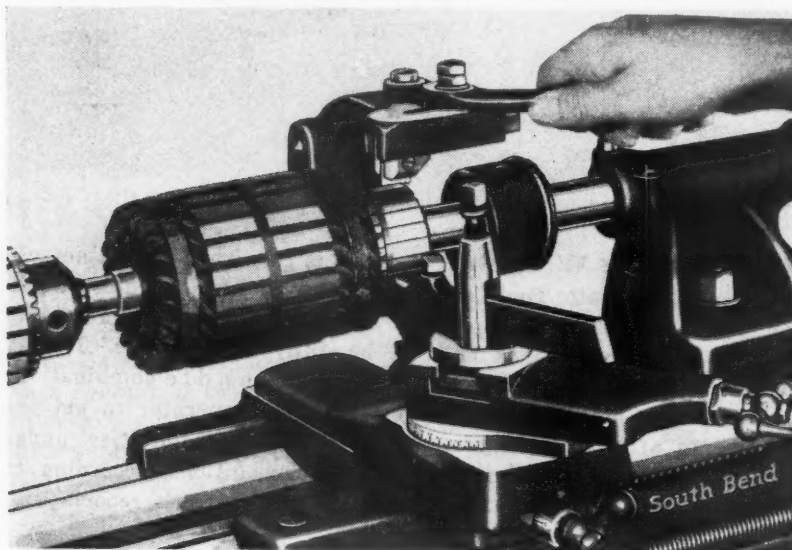
MANUFACTURERS AND JOBBERS AT THE ASI SHOW

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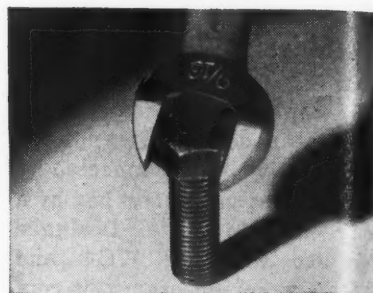


for You

For further information use postcard on page 49



THESE ARE PRODUCTS DISCUSSED BY



▲ 13. New Wrench Line

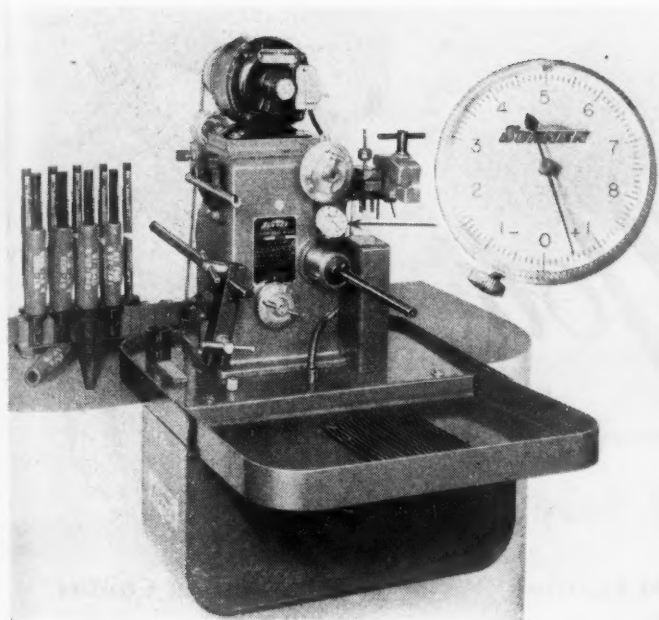
Blackhawk Mfg. Company: To fit into tight corners against walls and beyond restrictions where sockets, box wrenches and open ends cannot reach, the Blackhawk Wedg-Head has been designed. Wedged shaped jaws are said to make possible a perfect grip on a nut which other wrenches cannot touch.

◀ 14. Plastic Maskers

Marson Corp.: Flexible plastic maskers are now available to protect one section of the car while another section of the car is being painted, such as top masker or lower front and rear combination maskers when one or the other portion of a two-tone job is being done. The selection also includes an all-section masker with flaps to permit painting door, fender or trunk lid after a body repair job.

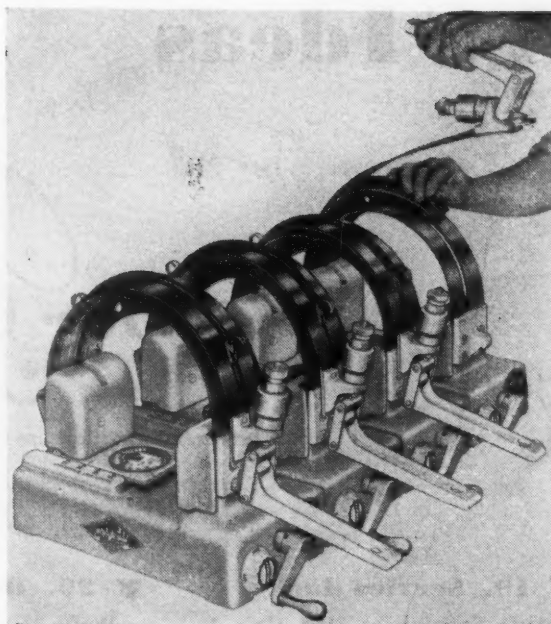
◀ 15. Lathe Kit

South Bend Lathe Works: For armature truing and mica undercutting jobs, the South Bend 9-inch lathe plus the armature kit is offered by this manufacturer. A steady power feed with rigid tool support is said to assure a smooth finish on the commutator, and with a properly ground tool the finish is such that polishing the commutator is unnecessary. The cutter blade on the mica undercutter is said to cut clean to a shoulder and follow the groove so that it won't slip off on into the copper.



▲ 16. Pin Fitting Gage

Sunnen Products Co.: A new measuring gage for pin fitting has been introduced by Sunnen. This measuring gage works on a patented principle which reads directly in tenths of thousands. It is designed particularly for pin fitting rods and pistons, as well as for measuring the large bore end of the rod. The manufacturer claims that using this gage with the Sunnen honing machine will cut pin fitting time in half. It also handles pistons, con rods, brake cylinders, small motors and other parts. Range is 400 in. to 2.625 in.

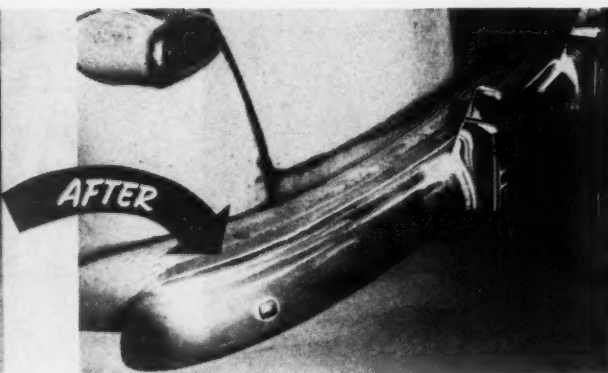
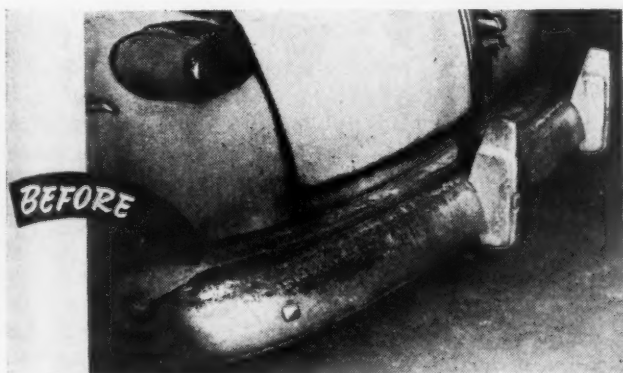


▼ 17. Chrome Process

R. M. Hollingshead Corp.: A cold plating process for replating chrome and rusted metal surfaces without removing parts is now available. Known as "Wiz Kold-Plate" it is actually a metal in paste form which, when thinned with "Kold-Plate Solvent," may be brushed or sprayed on a clean surface to provide a durable and attractive metal finish. The manufacturer states that Kold-Plate will not rust or peel from the surface. One quart is sufficient for replating five sets of bumpers.

▲ 18. Brake Bonder

Barrett Equipment Co.: A new electric bonder and debonder is featured in the complete Barrett line of service equipment. Speed and ease of operation are claimed for the unit which is known as the Minit-Bonder and De-Bonder. They are available in two models, the B-600B and B-602, available in one, two and four shoe units. The B-600B handles 9 to 12 inch passenger car shoes; the B-602 services 12 to 16 inch truck shoes. Speed is a result of the patented shoe holder which adjusts quickly to size.



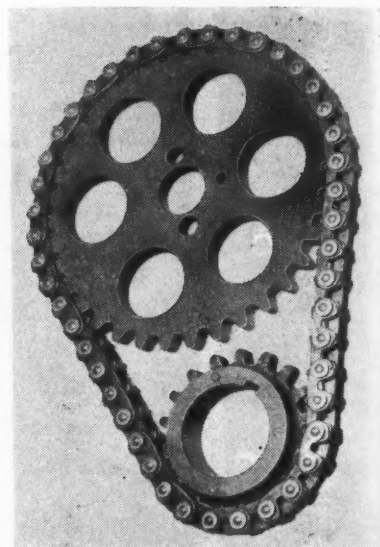
BY MANUFACTURERS AND JOBBERS AT THE ASI SHOW

A S Ideas



for You

For further information use postcard on page 49



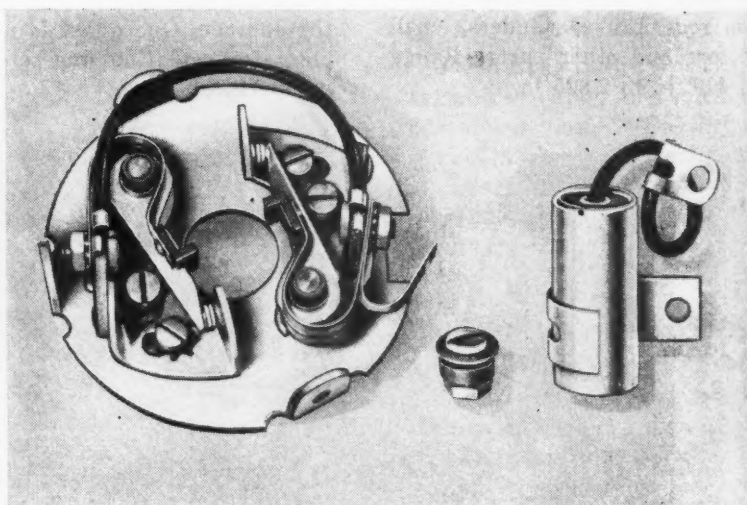
▼ 19. Service Jack

Auto Specialties Mfg. Co.: A new two-ton hydraulic service jack has been added to the Ausco line of hydraulic and mechanic passenger car, truck and garage jacks. It is built with side frames made of $\frac{3}{8}$ inch steel plate while the lifting arm, saddle, saddle frame, handle socket, wheels and other parts which take up the load burden are made of unbreakable malleable iron. The jack is 42½ inches long, has a 45 inch handle and weighs 135 pounds.



▼ 20. Dual Ignition

Wells Mfg. Corporation: Dual breaker ignition parts for Chevrolet cars are now available from this firm. The most important feature claimed for these new assemblies is that they can be installed by anyone without the removal or dismantling of the distributor assemblies. Their use provides longer coil saturation with a resultant better spark at the plug thus insuring better ignition and enabling better carburetion adjustment.



▲ 21. Timing Chains

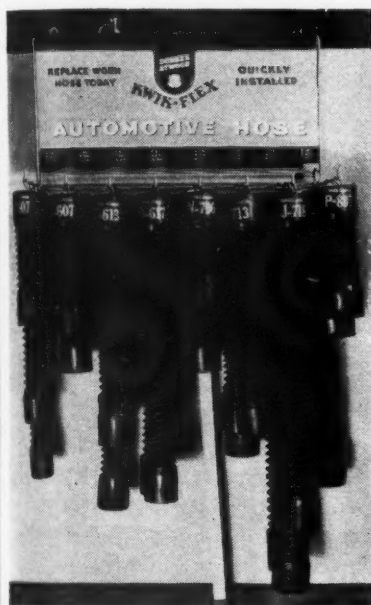
Link-Belt Co.: Link-Belt automotive timing chains have a simple three piece joint construction designed for maximum efficiency, according to the manufacturer. Two removable hardened steel segmental bushings extend across the entire width of the chain, thus doubling the bearing surface and halving the bearing pressure on the joint. This design assures proper distribution of load and lubrication, compensates for wear and serves to maintain a tight

THESE ARE PRODUCTS DISCUSSED BY

joint on the non-load side of the chain to eliminate "slap" and "thresh" of the chain.

▼ 22. Radiator Hose

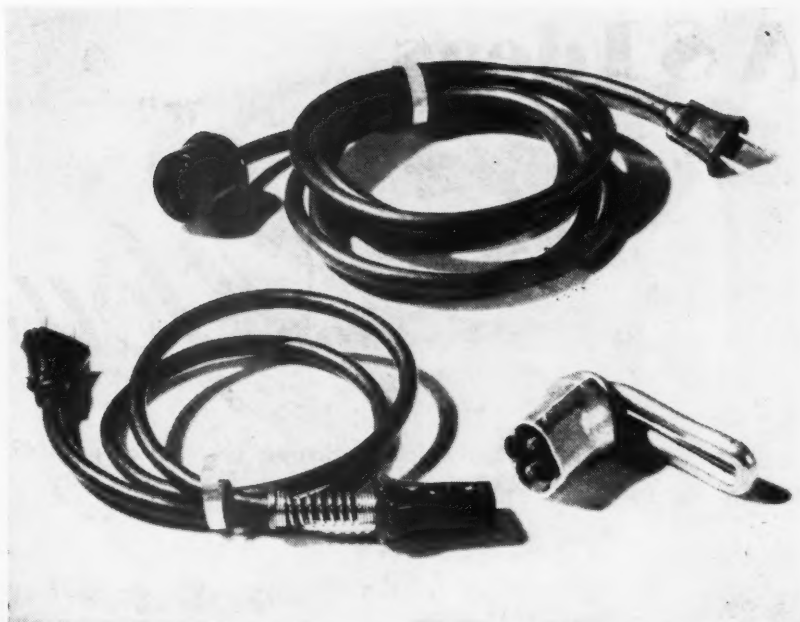
Durkee-Atwood Co.: "Kwik-Flex" is the brand name of a complete line of patented automotive hose built around a tempered steel coil spring. The hose bends, stretches, or compresses to fit without the use of special tools. It is installed with standard hose clamps and features molded rubber hose ends. Only



eighteen sizes are required to fit all 1936-1952 passenger cars.

► 23. Sound Deadener

Carborundum Company: Red-I-Cling Autobody Deadener is a heavy black coating used to deaden any sound or vibration in trunks, doors, hoods and under body areas after repair work is completed. It is also said to seal out dust, moisture, fumes and help to prevent rust and corrosion. Red-I-Cling is available in gallon cans.



▲ 24. Engine Heater

General Electric Co.: The GE engine heater fits in the lower radiator hose to pre-warm engine in cold weather. It heats from the bottom up and is claimed to provide ample heat in sub-zero temperatures. The installation is permanent. A

cord runs through the radiator grille and connects to an extension which plugs into an electric outlet in your house or garage. The unit consists of a Calrod tubular heater and two cord sets. One cord extends through the radiator grille, the other plugs into nearest socket.



MANUFACTURERS AND JOBBERS AT THE ASI SHOW

A S Ideas

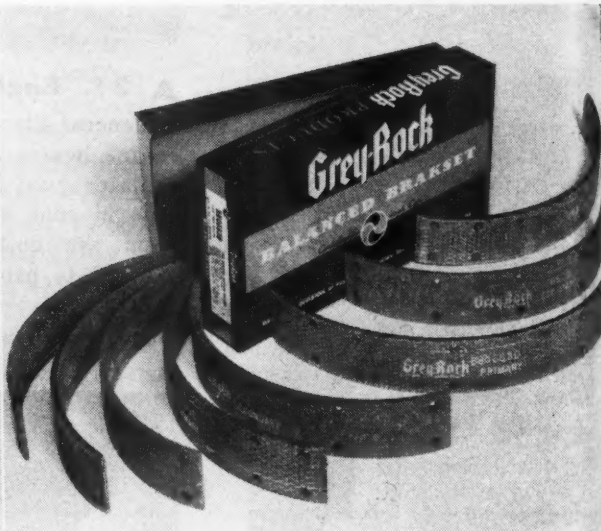
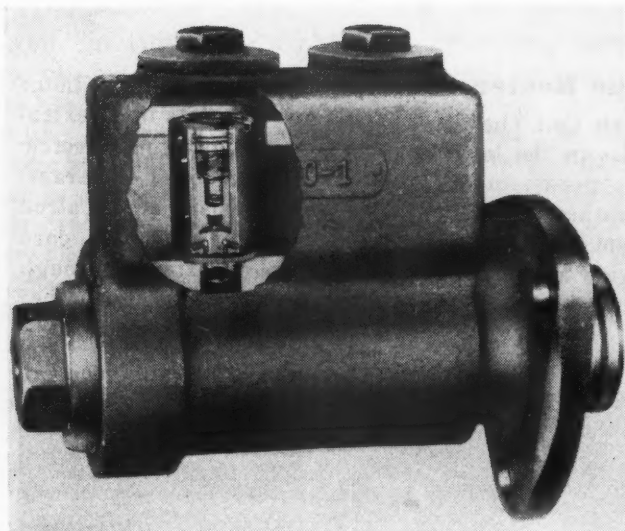


for You

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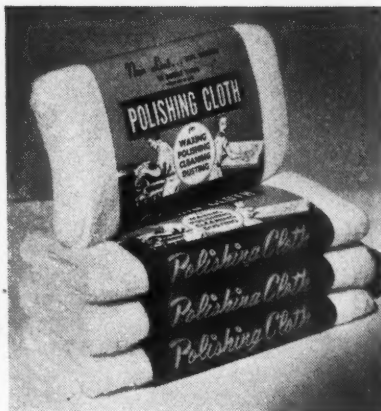
▼ 25. Brake Lining

Grey-Rock Div. of Raybestos-Manhattan: Grey-Rock balanced brake sets and balanced truck sets are offered for use as deluxe brake lining for passenger cars and light and medium trucks. They are available for further improvement on braking action on some makes and models with combinations of woven and molded linings, as well as specially developed woven linings designed to improve brake linings by providing faster stops and overcoming hard pedal.



▲ 26. Power Brakes

Minnesota Automotive, Inc.: The Mico power brake cylinder is designed to deliver twice the line pressure to the brakes without increasing the pedal pressure. The construction of the Mico unit uses only one high pressure cup and one low pressure cup, made possible by the Mico relief valve. Made to replace the master cylinder, it can be installed within an hour's time, according to the manufacturer.



◀ 27. Polishing Cloths

Rittenbaum Bros.: Nun-Lint Polishing Cloths are available in three, five, ten and 25 yard packages. In addition, the tubular knit rolls of polishing cloths are available in ¼, ½, 1, 5, 10, and 25 pound rolls. These rolls of polishing cloths are made of a new soft yarn which is claimed to be lint-free and soft, especially suitable for use in automobile polishing.

THESE ARE PRODUCTS DISCUSSED BY

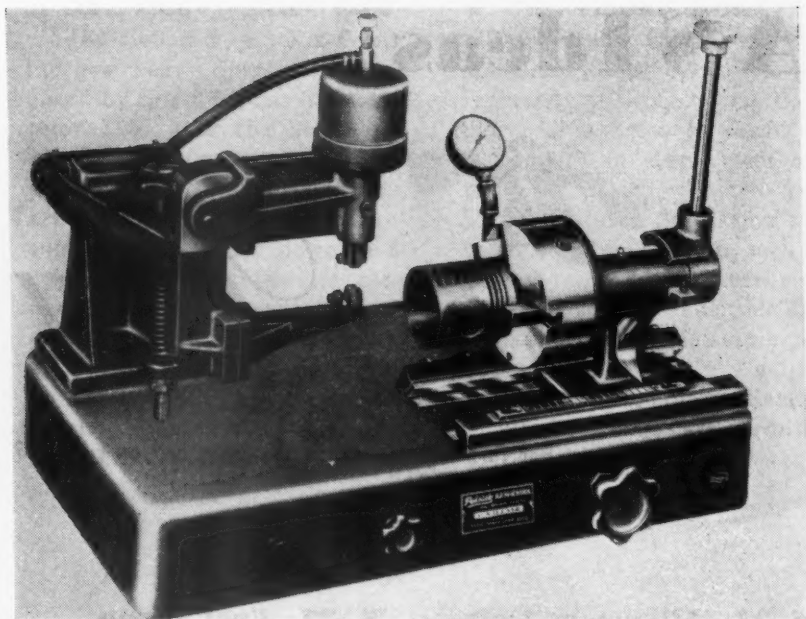


▲ 28. Fabric Spray

"X" Laboratories, Inc.: A new, quick drying spray-on color product called "X" Fabric Coat for refinishing automobile upholstery fabric trim, floor mats and convertible tops has been introduced. The new product, according to the manufacturer, when sprayed on upholstery, headliner, door panels, carpets, leatherette, gives the fabrics in an old car a bright look without impairing the texture.

► 29. "Y" Compressor

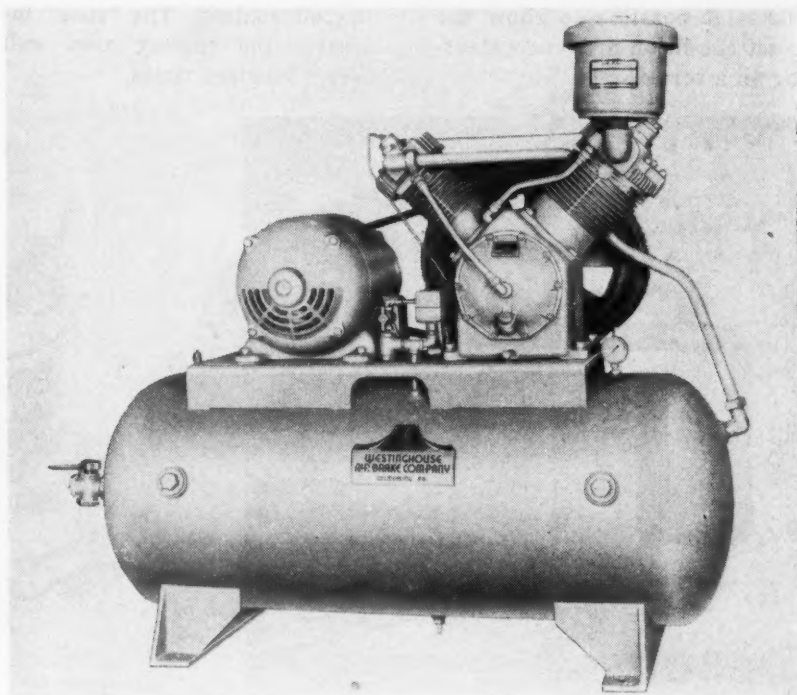
Westinghouse Air Brake Co.: The 15 horsepower "Y" compressor is designed to meet the largest capacity service demands of the industry. A new low pressure cylinder head with increased valve capacity is said to assure high efficiency. High and low pressure pistons are balanced to reduce vibration to a minimum, and a large inter-cooler and strategic location of final discharge pipe are instrumental in rapid heat removal by the large fan flywheel.



▲ 30. Resizing Machine

Wilkening Mfg. Company: The Pedrick Kam-Knurl is a machine for expanding piston cam diameters and producing a notched or knurled surface on the thrust faces of the piston skirt. The machine does this by

squeezing, rolling and swaging between two roller knurls, one on the outside of the piston and the other acting as a roller anvil on the inside. The amount of knurling is controlled by air pressure. Pistons of two to six inches in diameter are accommodated by the chuck.



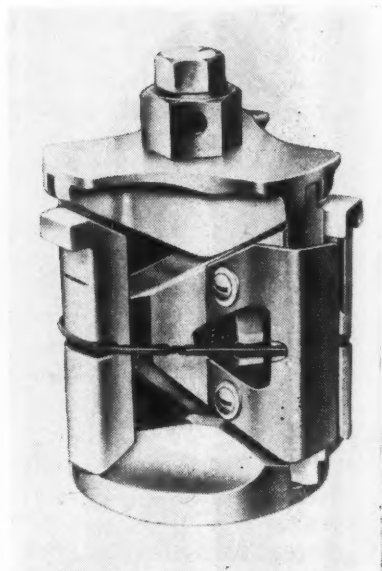
MANUFACTURERS AND JOBBERS AT THE ASI SHOW

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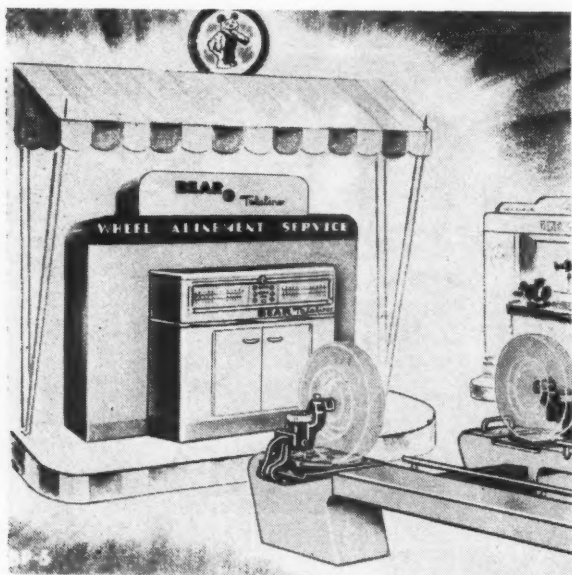
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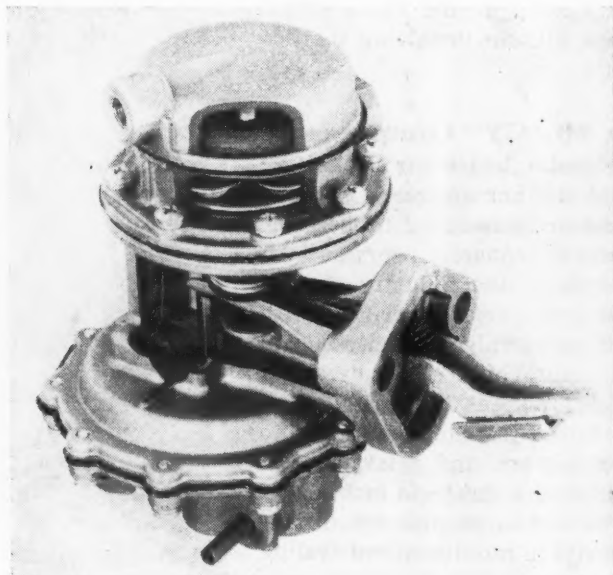
▼ 31. Alignment Unit

Bear Mfg. Company: A complete line including the latest innovations in safety service equipment is offered by Bear Mfg. Company. Among these is the Bear Telaliner with its electric magnetic alignment checking, a unit which provides merchandising qualities along with scientific testing. The machine makes it possible to show the exact condition of a car's steering on a screen.



▼ 32. Fuel Pump

Carter Carburetor Corp.: The movable cam lever "shoe" designed to increase cam and cam lever life has been introduced by the Carter Carburetor Corporation on its new combination mechanical fuel pumps. On conventional pumps, pressure created by the heavy vacuum pump spring must be borne by a very narrow contact. The "shoe" increases the contact area well over a hundred times.



▲ 33. Ridge Reamer

The Lisle Corporation: A ridge reamer which is said to offer three important new advantages has been introduced by the Lisle Corporation. Known as the RR-50, the reamer handles a range of from 2.6 inches to 5 inches with a single set of jaws. It is designed so that even at the extreme range the jaws are still fully engaged in the ways in the top and bottom plate.

THESE ARE PRODUCTS DISCUSSED BY

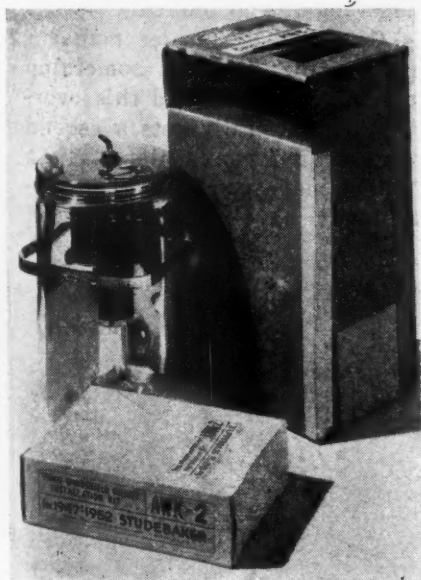


◀ 35. Heavy Duty Coil

C. E. Niehoff & Co.: Nie-Tron, the new heavy duty coil introduced by this firm, has been developed to pack the hot-spark reserve power needed to get top performance from today's modern engines. The coil will fire an engine with battery down to 2 volts, the firm states. Its secondary output exceeds that of standard coils, with hot spark at high speeds. It is said to put no extra draw or overload on primary system, precluding the point failure and need of high-capacity condenser.

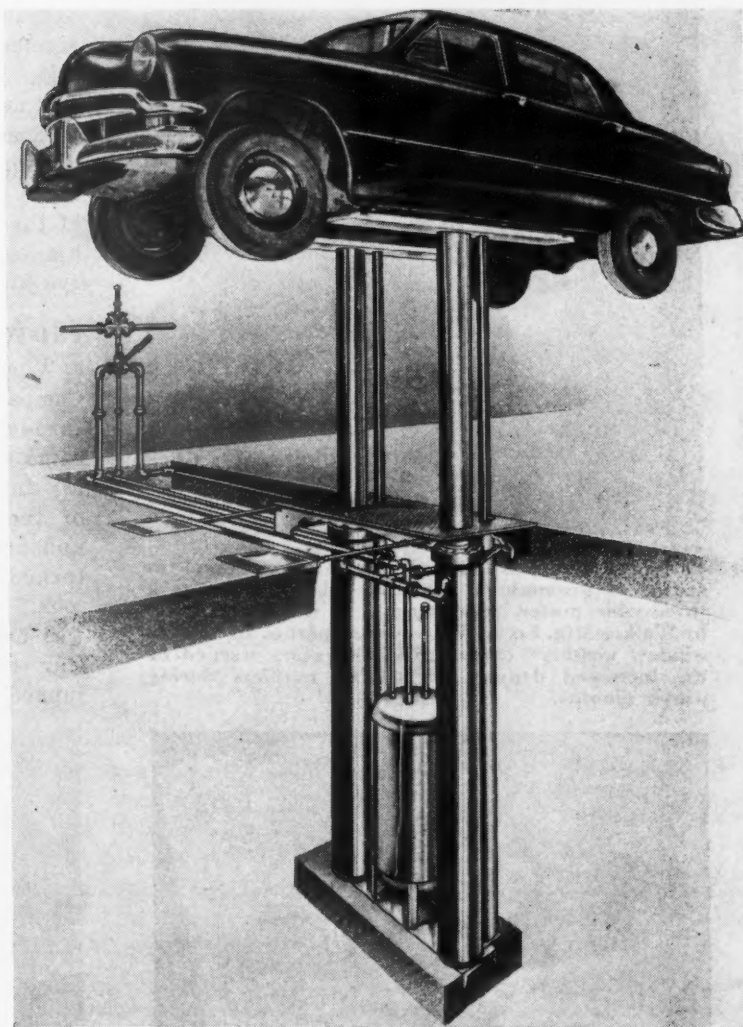
▼ 34. Washer Kit

Trico Products Corp.: A new line of custom built windshield washers is packaged so that only four different types will fit 61 different car models. Three of the sets provide quick installation on various years of Chevrolet, Ford and Chrysler line of cars. The manufacturer states that the fourth set with separate installation kits will fit 33 additional car models.



▼ 36. Frame Hoist

Globe Hoist Co.: Two types of "Frame-Kontakt" hoists are featured by Globe Hoist Company. This hoist is manufactured both in single post and two post design, the two post having parallel flat frame contacting members atop each of the hydraulic rams, thereby exposing the entire underside area of the car. Both the single post and two post types are said to be adapted for lubrication because suspensions are permitted to be relaxed while the car is lifted.



MANUFACTURERS AND JOBBERS AT THE ASI SHOW

Merchandising

Merchandising moves goods towards people . . . Advertising moves

Eye-Catchers That Draw Business . . .



Parts and equipment manufacturers are an excellent source of promotional material. Shown below is a three-color poster, measuring 2 ft. x 3 ft., offered by Walker Mfg. Co. of Wisconsin as part of its "closed window weather" campaign. Drivers are warned of the increased dangers of leaking mufflers during winter months.



In Wilmington, Delaware, independent shop operator Bill Marsili had a three-wheel motor scooter and an antique sleigh sitting around idly. When he put the two of them together the motorized sleigh, shown at the left, developed into a novel mobile "ad." A small platform out front holds packages for emergency deliveries. Signs painted on either side of the sled advertise Bill's business and make his vehicle a "calling card" that catches the eye and snares extra business.

How to Make 'em Look Twice

When L. A. Blackburn, Blackburn Motor Company of East St. Louis, Illinois, was going through his copy of *MOTOR AGE* recently he came across a merchandising idea that struck his fancy. As George Walsh, sales manager of the firm, points out, "It takes something unusual to catch the eye today and this overturned car on our lot generally gets a second look." The stunt created more interest than was expected and it made good use of a pre-war car that might have eventually been junked.



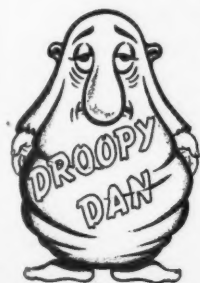
and Promotion

people towards goods . . . When forces meet, a sale is made

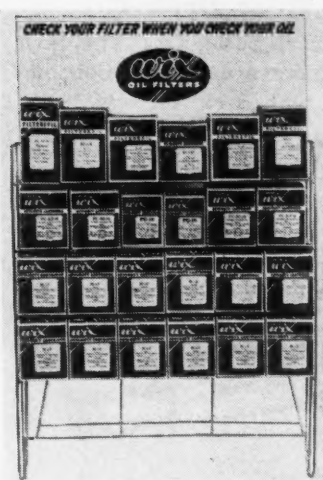
A New Merchandising Program

A new trend in merchandising battery cables has been developed by the Crescent Company, manufacturers of "Wiry Joe" automotive wire and cable. The four-point program features a display with a selling message, a package that can be racked, adequate cataloging and retail pricing information and something to attract the consumer's attention to the need of replacing battery cables. The merchandiser is shown at the right. A package with a picture of the cable can be racked for display. A wall chart gives complete cable and wiring data. The consumer's attention is attracted by an old fashioned rat trap from which two or three defective cables are hung. The rat trap is suspended from a circular sign which reads "We Caught These Rats in our Customers' Cars."

Meet Droopy Dan, "Belt Sag" Man



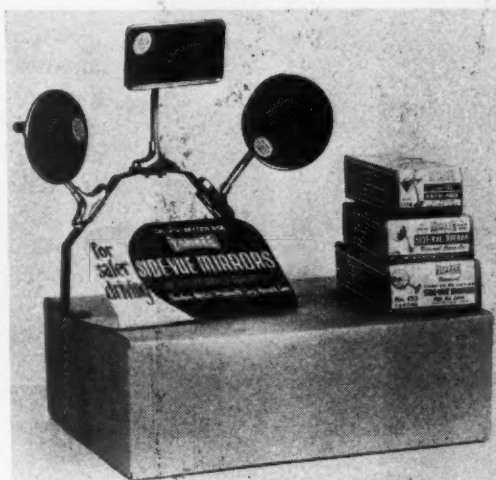
A clever method of making car-owners fan-belt conscious has been developed by Thermoid. A promotion program with Droopy Dan, the "Belt Sag Man" as key figure will help servicemen to show customers how fan belts wear out, and will pave the way for increased fan belt sales. Sales aids include merchandising posters, direct mail pieces and a lapel button with the face of Droopy Dan the "Belt Sag" Man and the words, "Watch Out For Droopy Dan." The button is designed to be worn by service personnel. When customers ask about its significance, they are told how belt sag or stretch leads to ultimate failure. After stretching . . . the belt slips . . . then it wears . . . and finally fails. The company points out that Thermoid Fan Belts are pre-stretched to prevent belt sag. The serviceman can then suggest to the motorist that the fan belt on his car should be checked for sag.



Wix Accessories Corp. offers this new display rack, designed to occupy a minimum of space and provide convenient storage for Wix oil filter cartridges.

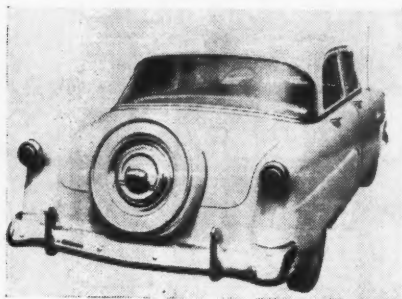


Yankee Metal Products Corp. has launched a program for merchandising mirrors. It features three of Yankee's fastest moving passenger car mirrors, mounted on a four color "Salesmaker" display as shown below.



37. Rear Deck Kit

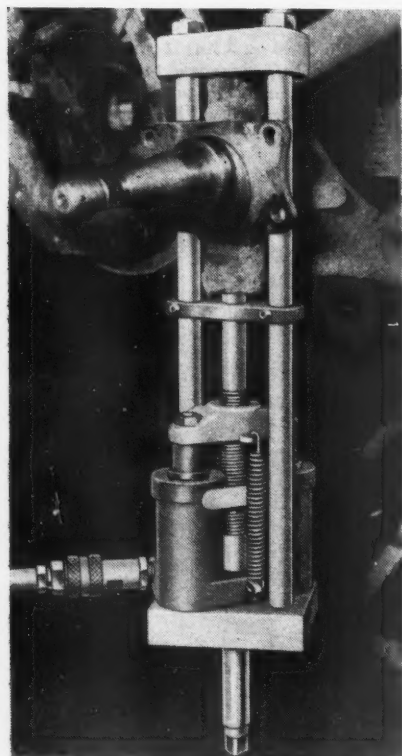
J & H Sales Co.: This firm is featuring a new Erie Continental type rear deck kit which is de-



signed to give the car a custom look at a fraction of the price of similar devices. The kit fits all 1949 through 1952 Ford and Chevrolet models except the Chevrolet Fleetline model. The installation is said to take about ten minutes and there are no holes to drill, as the kit clamps rigidly to the bottom of the rear deck lid. It is not designed to carry a spare tire and lifts with the trunk lid.

38. King Pin Pusher

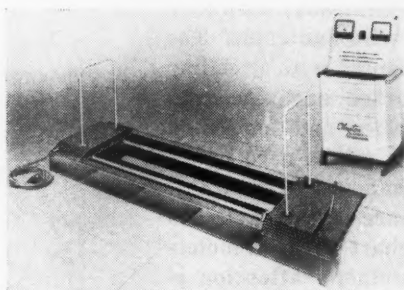
Owatonna Tool Co.: With the OTC 17½ ton Power Twin hydraulic ram to supply the power, the



new OTC king pin pusher is designed especially for removing car and truck king pins. It can also be used for pulling and installing bands, gears, sleeves, bearing outer races, pinions and sheaves, etc. It is a portable power unit with finger tip control.

39. Dynamometer

Clayton Mfg. Company: The C-40-FF Clayton Dynamometer has been designed to permit installation in service shops where space limitations make the use of earlier models impractical or impossible. It is supplied as an integral machine which may be installed with-



out deep excavation sub-floor construction. The flush-floor model permits quick positioning of cars on the dynamometer for testing and quick drive-off after testing with an unobstructed flow of traffic when the dynamometer is not in use.

40. Gapping Tool

Blue Crown Spark Plug Co.: To provide greater accuracy and eliminate guesswork in spark plug gap setting, a new tool is being marketed by this firm. The device, named "Gap-Rite," is constructed of cold rolled steel and measures 8½ inches high with a handle 6 inches long. The base has holes for bench mounting. Included with each "Gap-Rite" is a set of six thickness gages. The plug is placed in the tool, electrode end up. The proper gage for the gap size is inserted between the center electrode and the ground electrode. A tap of the hand on the gap tool handle drives the blunt-tipped device down upon the electrode, accurately setting the desired gap.

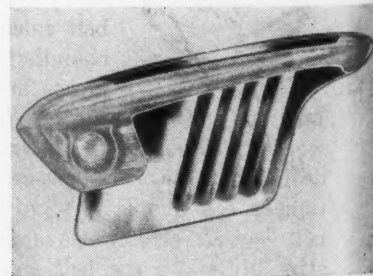


41. Rust Solvent

Walker Mfg. Company: Walker Super-Kwick is a rust solvent developed to speed up exhaust removal and for other "rust-busting" uses. It is available in a new pint size can with a plastic spout. It is said to penetrate swiftly into the tightest of rust bound connections making them easy to loosen. It contains no kerosene, ether, alcohol, or harmful acids.

42. Door Plates

Groboski Industries: The Styling Door Handle Guard Plates are a new "dress up" item for late model cars. Made of highly polished stainless steel and perfectly



designed to match the car manufacturer's body trim, they are easily installed in a few minutes. They are designed to prevent ring and key scratches, stop finger smudges, and scuff marks.

(Continued on page 50)

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HERE'S HOW TO GET

Free Information

LISTED here are the new products which appeared in the ASIdeas section of Chilton's Motor Age, along with the key number for each product.

Fill in your name, address and other information on the free postcard below. Circle the numbers of the new products which interest you. Just tear out the card and drop it in the mail.

- 1. Body Jack
- 2. Screw Extractors
- 3. New Mufflers
- 4. Spray Booth
- 5. Wheel Aligner
- 6. Tire Chains
- 7. Wheel Balancer
- 8. Valve Rotators
- 9. Spray Gun
- 10. Crane Drive
- 11. Turn Signal Set
- 12. Impact Wrench
- 13. New Wrench Line
- 14. Plastic Maskers
- 15. Lathe Kit
- 16. Pin Fitting Gage
- 17. Chrome Process
- 18. Brake Bonder
- 19. Service Jack
- 20. Dual Ignition
- 21. Timing Chains
- 22. Radiator Hose
- 23. Sound Deadener
- 24. Engine Heater
- 25. Brake Lining
- 26. Power Brakes
- 27. Polishing Cloths
- 28. Fabric Spray
- 29. "Y" Compressor
- 30. Resizing Machine
- 31. Alignment Unit
- 32. Fuel Pump
- 33. Ridge Reamer
- 34. Washer Kit
- 35. Heavy Duty Coil
- 36. Frame Hoist
- 37. Rear Deck Kit
- 38. King Pin Pusher
- 39. Dynamometer

- 40. Capping Tool
- 41. Rust Solvent
- 42. Door Plates
- 43. Switch Catalog
- 44. Alignment Gage
- 45. Compressors
- 46. Frost Remover
- 47. Steering Adjuster
- 48. Merchandising Board
- 49. Oil Merchandiser
- 50. New Plier Design
- 51. Filter Catalog
- 52. Oil Additive
- 53. Clutch Sets
- 54. Plug Socket
- 55. Inspection Tool
- 56. Counter Display
- 57. Storage Batteries
- 58. Car Stabilizer
- 59. Battery Chargers
- 60. Frame Machine
- 61. Drying Oven
- 62. Turn Signals
- 63. Ignition Contacts
- 64. Exhaust Gaskets
- 65. Shock Merchandiser

- 66. Universal Joint
- 67. Electric Tools
- 68. Wheel Aligner
- 69. Shop Lift
- 70. Brake Drum Lathe
- 71. Delivery Cycle
- 72. Dealer Film
- 73. Direction Signals
- 74. Combination Crane
- 75. Portable Power Saw
- 76. Drum Lathe
- 77. Service Jack
- 78. Piston Rings
- 79. Portable Welder
- 80. New Insulation
- 81. Fitting Stock
- 82. Hydraulic Lift
- 83. Color Service
- 84. Steering Hose
- 85. Fluid Dispenser
- 86. Arc Welder
- 87. Power Brakes
- 88. Seat Covers
- 89. Cleaning Units
- 90. 6-12 Volt Chargers
- 91. Oil Seal Stocks

- 92. Green Sealer
- 93. Brake Sets
- 94. Power Take-Off
- 95. Control Handle
- 96. Slow Chargers
- 97. Weatherstrip
- 98. Oil Additive
- 99. Idler Arm Replacement
- 100. Piston Rings
- 101. Shop Equipment
- 102. Battery Charger
- 103. Oil Filters
- 104. Parts Testers
- 105. Island Units
- 106. Carbon Remover
- 107. Piston Service
- 108. Fire Extinguisher
- 109. Spring Compressor
- 110. Cleaner Polish
- 111. Windowshade
- 112. Wall Chart
- 113. Pressure Purger
- 114. Radiator Hose
- 115. Testing Booklet
- 116. Air Compressor
- 117. Batteries

Frank P. Tighe, EDITOR
MOTOR AGE
Chestnut & 56th Sts., Philadelphia 39, Pa.

Please send me further information on the New Products, the code numbers of which I have circled below.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
15	16	17	18	19	20	21	22	23	24	25	26	27	28
29	30	31	32	33	34	35	36	37	38	39	40	41	42
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113	114	115	116	117									

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POSTCARD

Your Name Your Title

Your Company

Car DealersWholesalersIndependent

Address(STREET & NO.)(CITY)(ZONE)(STATE)

AS Ideas for You

43. Switch Catalog

Joseph Pollak Corp.: The latest in the Joseph Pollak line of automotive switches is shown in a supplement to the Catalog 51. In it are described and illustrated light switches, starter switches, mechanical stop-light switches, heater-blower switches, circuit switches, and ignition switches. Featured in this line is an ignition-starter switch which can be installed on any car with a two wire push-button starter.

44. Alignment Gauge

Weaver Mfg. Company: The Weaver 3-Way (camber-king pin inclination-caster) Alignment Gauge is said to make complete wheel alignment checking and correction faster and easier. It makes camber readings automatically, and king pin inclination and caster are checked in one operation. All readings are taken from the wheel bearing face. Gauges are held in position by a unique spindle nut clamp. The clamp is attached by locating its points in cotter key slots in the spindle nut. For correction of both camber and caster angles,

the gauge takes into account the fact that especially on independent front wheel suspension vehicles where adjustment is made for caster, the camber and king pin inclinations are also affected and vice versa. With this gauge the operator is able to watch the simultaneous change of caster and camber angles as adjustment or other types correction is accomplished.

45. Compressors

The Kellogg Div. of American Brake Shoe Co.: Two new air compressors have been added to the Kellogg line. One model is designed for tire service trucks, a compact heavy duty unit, delivering sufficient pressure to inflate truck tires and operate impact wrenches for wheel lugs. The compressor is gasoline engine driven and equipped with an electric starter and automotive type muffler. It has an automatic unloader control, pressure regulator, and a three-way valve for use of full tank pressure or regulated air. A portable compressor is also announced wherever a highly mobile air supply is desirable.

46. Frost Remover

Las-Stik Mfg. Company: A liquid spray designed to remove frost coatings from automobile windshields and windows has been announced. Trade named Las-Stik Dee-Frost, it is put in an unbreakable plastic squeeze flask, made to fit the hand. Refills in glass bottles are also available. The clear, colorless liquid will remove normal frost coatings from glass within ten seconds after the application. Thin ice can be removed within thirty seconds and the manufacturer states that it is harmless to finish, rubber and chrome and leaves no film.

47. Steering Adjuster

Accurate Products, Inc.: A new 1953 idler arm adjuster has just been marketed by Accurate Products. This adjuster is for Chevrolet passenger and sedan delivery 1949 to 1952 models. It is said to be easily installed and no special tools are required. It eliminates stabilizer arm noise and prevents tie rod end wear.

48. Merchandising Board

Ammco Tools: A new merchandising board for jobber display is now available. It is decorated in blue and yellow and perforated so that specially made brackets can be used to support shelves or tools. These brackets can be located in any of the holes, so that the shelves or tools can be hung on them in any combination. Merchandiser is primarily designed for floor use but can be hung on a wall if necessary. The back of the board is fitted with shelf space for the stocking of Ammco engine rebuilding and brake service tools and accessories. Thus the merchandiser is a completely self-contained unit.

(Continued on page 150)

BUSINESS REPLY CARD

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Chilton's MOTOR AGE

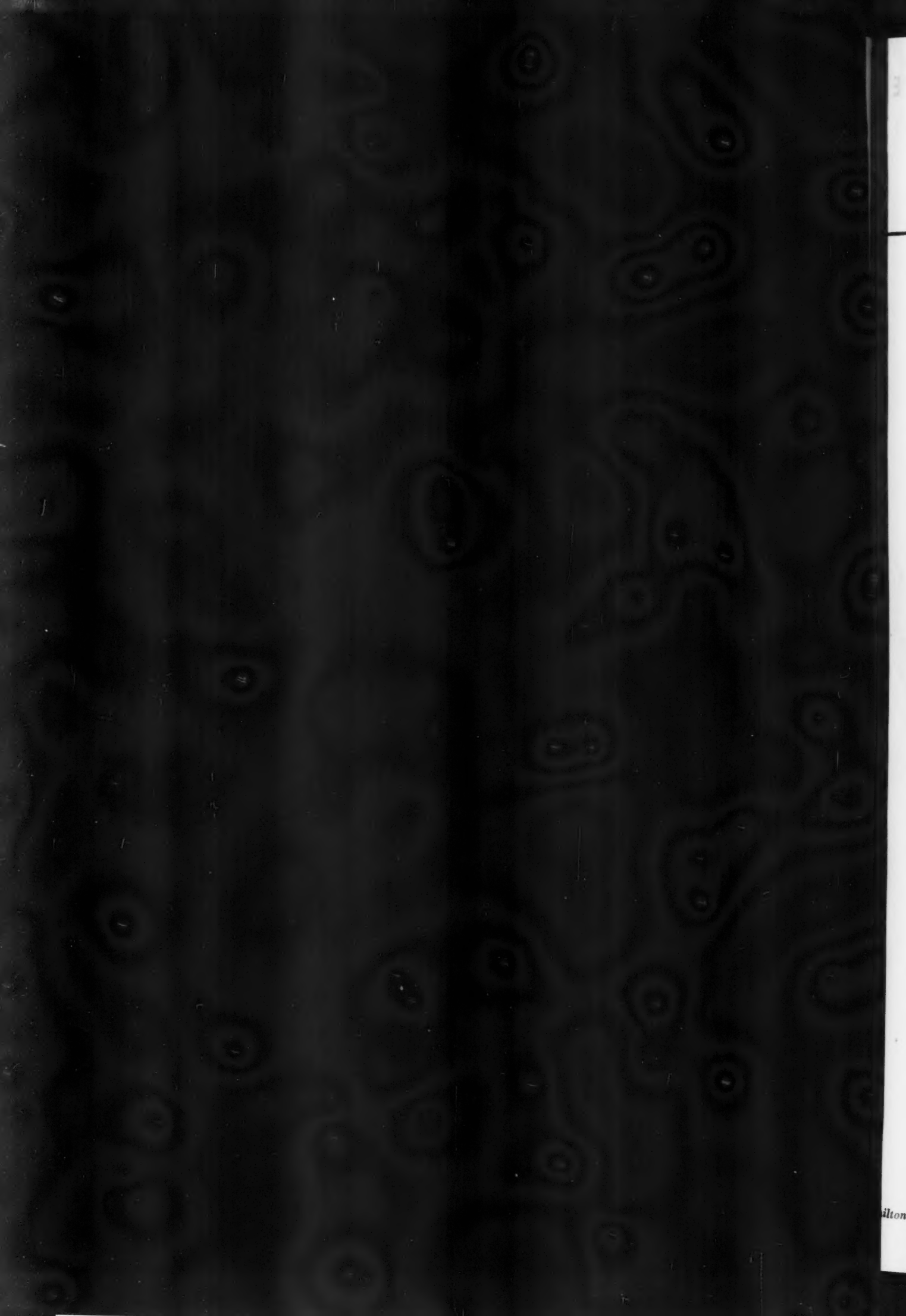
Chestnut and 56th Sts.

Philadelphia 39, Pa.

Attention: Frank P. Tighe, Editor

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NEW Scene

NEWS DIGEST OF THE MONTH IN PICTURES AND FACT • • JANUARY, 1953

"I Cover the Autofront"by Len Westrate

DESPITE MATERIALS SHORTAGES AND OTHER DIFFICULTIES, the automotive industry wound up 1952 with its fourth best production year. Unofficial totals place output at 5,554,000 units, exceeded only by 1949, 1950 and 1951. Production this year is expected to reach between 5.3 and 5.4 million passenger cars and about 1.3 million trucks.

AUTOMOBILE FINANCE MEN ARE LOOKING FOR MORE rapid depreciation and a higher repossession rate this year. One spokesman in Chicago said that the depreciation rate in 1953 probably will be higher than at any time during the last 10 years. He also predicted that dealer inventories of cars will be highest in history by the end of February, requiring drastic changes in merchandising and financing of cars.

DODGE IS GOING BACK TO FLUID DRIVE, optional on cars equipped with manual transmissions and manual transmissions with overdrive. Some time ago the company dropped the fluid coupling from these models but it is bringing it back because of demand.

IN SPITE OF GREATLY INCREASED PRODUCTION, Chevrolet has expanded its dealer body by only 40 new outlets since the end of World War II. Of this number, 27 were set up in 1952. The expansion represents slightly more than one-half of one percent of the approximately 7560 dealers selling Chevrolets.

WITH ALL THE TALK ABOUT NEW V-8'S, the trend away from the six cylinder engine isn't all that it seems. A quick run-down of the 19 makes of cars currently being produced shows that only five offer eights exclusively, seven have both sixes and eights in their lines (of which only one is a straight eight), five offer sixes only, and two offer fours and sixes.

MAJOR ATTENTION OF N.A.D.A.'S EXECUTIVE COMMITTEE, which met last month in Washington was the selection of a Managing Director from 411 applications for the top N.A.D.A. post. After screening the number was reduced to six or eight. Final recommendation to the Executive Committee will be made by President Sax Lloyd, Treasurer Foster Talbott and Regional V.P. Bill Mallon.

NASH PLANS TO OFFER AN OPTIONAL HIGH COMPRESSION ENGINE on its 1953 Ambassador series. The engine will be called the LeMansDual Jet Fire and is an in-line six turning up 140 H.P. It is essentially the same power plant used in the Nash Healy sports car which won top performance honors in the 1952 LeMans, France, 24-hour sports car race.

REDUCED AUTO INSURANCE PREMIUMS will be experimented with. Recognizing that high cost automobile insurance is inequitable to safe drivers, several underwriting companies are trying out plans which will result in lower premiums for accident-free drivers.

ONE EXPERIMENTAL PLAN WILL WORK BOTH WAYS. Liberty Mutual Insurance Co. will put such a program into effect in California, Feb. 1, under which policy holders will receive a 1 per cent reduction in their premium rate for each accident-free year they hold the policy. On the other hand, the premium will be increased 5 per cent for each year in which the holder has an accident.

THAT NEW MECHANICAL POWER STEERING UNIT, we mentioned several months ago, will be used by at least one automobile manufacturer this year ... will be a public announcement late this month. Auto executives say that acceptance of power steering is far ahead of any expectations ... some predict it will be standard equipment in five years.

CHICAGO EXPECTS 500,000 SHOW ATTENDANCE. All exhibit space at the Chicago automobile show, March 14 through 22 was sold out early in December. All car makes, nine makes of trucks, custom sports models, accessories and supplies will debut at the International Amphitheater ... with 500,000 visitors expected.

CHICAGO AND THE NATIONAL SHOW. Officials of the Chicago Automobile Trade Assn. have again repeated their views that the Chicago Auto Show should be made the national show. Officially, automobile manufacturers have not commented on the proposal but it is understood that they are cool to the idea.

FOR ONE THING, THE CHICAGO SHOW has always been a selling show and what some manufacturers have in mind is more of an institutional display to introduce the new models and build good public relations for the industry. Two such displays are already scheduled ... the GM Motorama this month and Auto-Lite's Easter Parade of Stars Auto Show during Easter week. Both will take place in the Grand Ballroom of New York's Waldorf-Astoria.

IT LOOKS AS THOUGH LABOR UNIONS are going to step up their drive for unionized service shop personnel this year. There have been rumblings that the AFL International Assn. of Machinists is going to intensify a drive among workers in dealers' shops and large independent shops.

CADILLAC TO UP CAPACITY 25 PER CENT over the next two years. The company, however, has not yet revealed details of steps to be taken to boost output capacity to 125,000 cars a year based on a 40 hour week. 1952 production was roughly 97,000. On a 6-day work week, output could reach 150,000 annually. Scheduled production for '53 is 112,500 units.

WILLYS-OVERLAND TURNS THE HALF CENTURY and will observe it by calling its 1953 line "Golden Jubilee" models. The company dates back to February 12, 1903 when the first Overland run-about was completed in a factory loft of the Standard Wheel Co. in Terre Haute, Ind. The old Overland Automobile Co. moved to Indianapolis in 1907 and finally to larger quarters in Toledo in 1912.

HOLD THE LINE ON PRICES IS CURRENT TREND. With the announcement by Pontiac that none of its 1953 models will carry a price increase, it is apparent that General Motors policy on prices will be to hold the line. Since price policy is set by the corporation rather than its divisions, it would seem that GM is going along with other companies which have already announced hold the line prices.

Dr. Manion to Keynote NADA Convention At San Francisco

The National Automobile Dealers Assn., which has provided its membership with many a successful convention and equipment exhibition in recent years, has another big sell-out event scheduled for February 14-18 in the Civic Auditorium, San Francisco.



Dr. Manion

Heading the list of distinguished speakers is Dr. Clarence E. Manion, leading American jurist and dean of the University of Notre Dame Law School. Dr. Manion is known to be a champion of American principles of business and government. He is author of many books on the subject including the widely praised "Key to Peace."

Panel Clinics Predominate

Previewing the program one discovers that Hanford A. Crockard, general chairman of the convention and exhibition, together with his committee of outstanding dealers have planned a great series of panel discussions both on service and selling in keeping with the business trends which N.A.D.A. members will face in 1953. Service supervisory personnel will be admitted to the exhibition and to the four clinics on service free of charge.



San Francisco Host to N.A.D.A.

A sales management clinic aimed to all sales personnel within the dealership will be presented as a part of the exhibition, a highlight of which will be a presentation by Jack Lacy, nationally known sales consultant. C. P. (Jack) Williams, a veteran of more than 30 years' experience in the automotive service field, will conduct a panel discussion on the value of service equipment.

ALONG the ROAD



. . . with Frank Tighe

About People and Things You Auto Know

Destination Atlantic City last month with the entire Motor Age staff to cover the Automotive Service Industries Show—a manufacturer-wholesaler exhibition that attracted well nigh 15,000.

The retailer wasn't present at the show, so your Motor Age reporters have brought the A.S.I. Show to you—with this complete A. S. Ideas issue.

It was the largest product exhibition in the world and it demonstrates the bigness of this automotive service business.

Don Teetor, who served as chairman of the A.S.I. Show committee and who is vice-president of Perfect Circle, "cut the pie" on the service market by pointing out that the largest part of the spending for automotive service, about 25 per cent, will go for small repairs and minor adjustments. Brake repairs and relinings will include about 16 per cent of the service and parts market. Motor tune-ups will account for ten per cent while repairs on the ignition system and the car body will account for nine per cent each.

Checking, cleaning, and replacing spark plugs will be about eight per cent of the market as will fuel system repairs and motor overhauls. The remainder of the adjustments and purchases will go for batteries, radiators, transmissions, clutches, carburetors, piston rings, rods, bushings, bearings and universal joints.

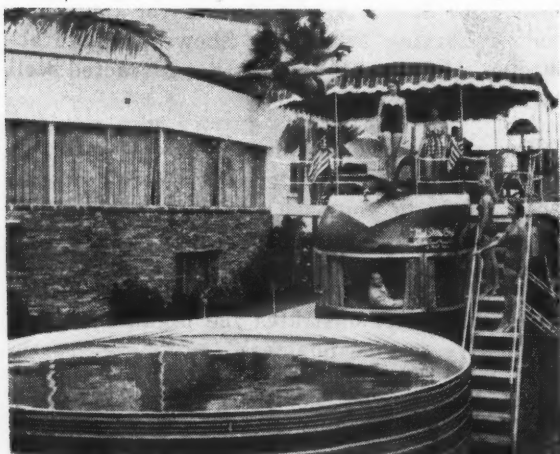
Dealers who sold the cars will make approximately one-third of all these adjustments and repairs. The balance will be made by other dealers, independent repair shops, filling stations, and by people who do their own repairs.

At the show, wholesalers and manufacturers discussed new products, new trends, new merchandising plans—all of which will enable you—the service retailer—to make a prosperous go of it in 1953. Here's wishing you the best of luck.

Your jobber's salesman is pictured as the "Man with a Mission" for he's now approaching you with the A.S. Ideas he picked up at Atlantic City. Motor Age is also a "Magazine with a Mission" bringing this more than 200 page report of the Show to you.

That's the job that Motor Age does for you after the show! Which prompted us to sing:

*After the Show is Over,
After the Jobbers Have Gone,
Many a Retailer's Waiting;
Many's the Job to be Done.
That's when you Tell Your Story
To Dealers Who Want to Know.
That's When ASIdeas Pay Off,
After the Show!*



This \$75,000 65-foot trailer has a swimming pool and a 250 sq. ft. deck for sunbathing, dancing, etc. The pool folds and is stowed aboard when not in use.

Tim Flock (left), of Atlanta, Ga., is being congratulated by Ted Chester, Atlanta Hudson dealer who sponsored Flock's Hornet in which he won the 1952 Grand National stock car crown. Flock piled up a total of 6858 points.



For the Enthusiast

Two lightweights are Miss MarElena Burns (105 lbs.) and this "Skorpion" plastic body (150 lbs.) Sold in "kit" form consisting of three sections, the body is installed by lowering a Crosley chassis center section 6-inches and adding supporting outriggers.

Stan Sayres, who drove Slo-Mo-Shun to the world's speedboat record last summer, inspects Chrysler's experimental V-8 marine gear at Chrysler Corporation's show in Seattle. Sayres is explaining the engine to Ilene Lindstrom of Seattle. The educational exhibit has been viewed by more than 6,000,000 people in all parts of the country.



Curtice To Be New GM President

Harlow H. Curtice has been named as acting president of General Motors following Charles E. Wilson's appointment as Secretary of Defense.

Curtice, 59 years old, began his career with AC Spark Plug as a bookkeeper, to become comptroller at the age of 21. He joined Buick in 1933 and is credited with having doubled this company's output the following year.

In 1948 Curtice became corporation executive vice president.

The Super Jet four-door sedan, Hudson's model for the low-priced field.

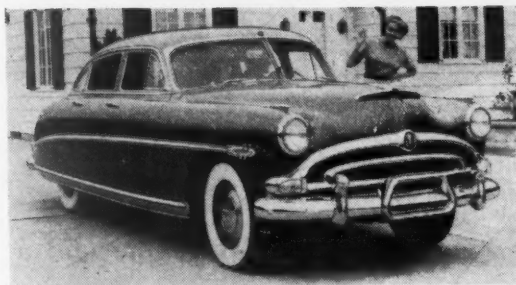


The New Jet—by Hudson

THE long awaited Hudson light car, priced within the so-called low price range, now has been officially announced by Hudson Motor Car Co. It is launched in two models—the Hudson Jet and deluxe Super Jet—both in a four-door sedan. The Jet model has a base list price of \$1685.00; the Super Jet has a list price of \$1775.00.

Except for the special deluxe features of the Super Jet both models have the same basic specifications. Featuring the Hudson step-down design, with body and frame integral, both models have a wheelbase of 104.3 in., overall width of 67 1/16 in., overall length of 180 11/16 in., and the extremely low weight of 2800 lb.

The engine is new—of the same basic design as other Hudson L-head engines. It has six cylinders—3 in. bore x 4¾ in. stroke, 202 cu. in. displacement. The standard engine develops 104 bhp with compression ratio of 7.5 to 1. As an option, the same basic engine is available with compression ratio of 8 to 1 with an aluminum cylinder head. This set-up, together with Hudson Twin-H-Power—two carburetors and special induction system—



The 1953 Hudson Hornet four-door sedan. Notice the new front end with air-scoop hood ornament.

Hudson introduces a model for the low-priced field, along with its restyled line for 1953

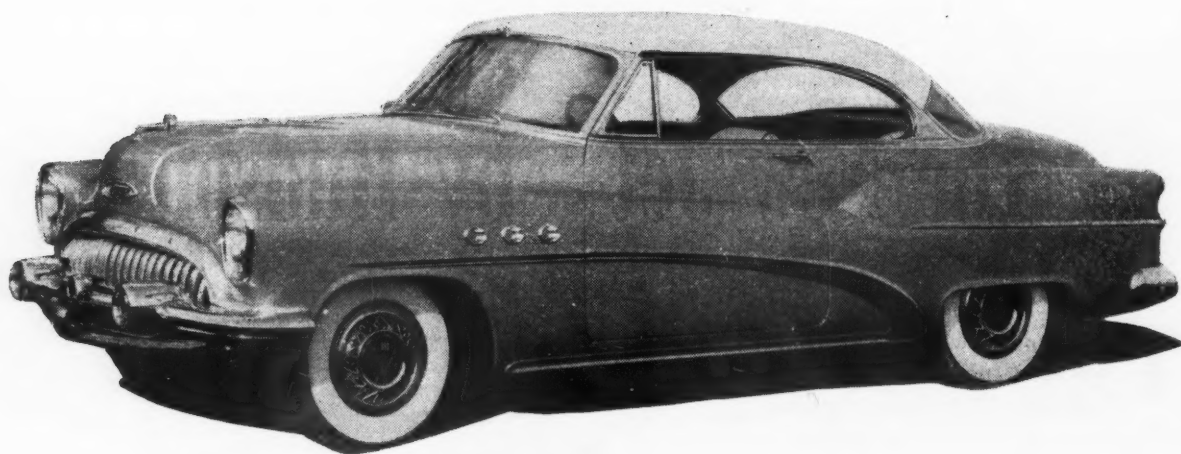
provides 114 bhp to give exceptional performance on the road.

Both models also are available with Hydramatic drive or B-W overdrive.

An improved semi-floating hypoid gear rear axle has been designed for these cars with a standard gear ratio of 4.1 to 1 with manual shift

(Continued on page 104)

Buick Builds A Better Buick



A new V-8 engine and a radically changed
Dynaflow unit are announced on new models

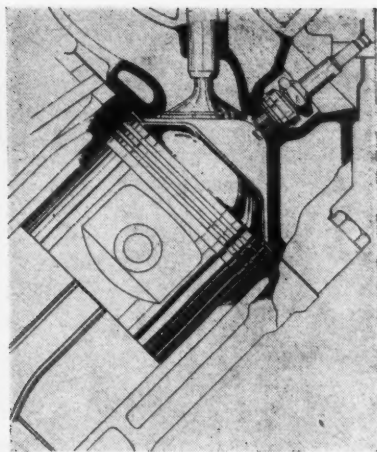
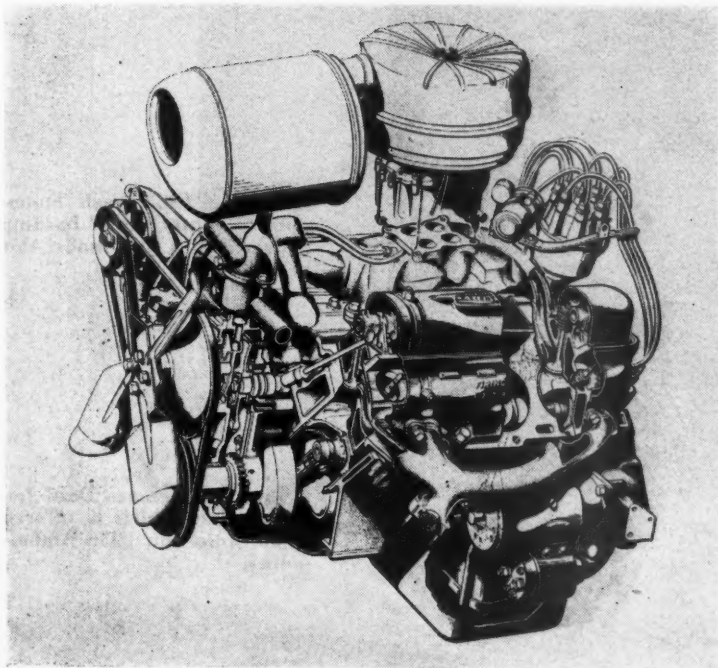
by Joseph Geschelin, Detroit Technical Editor

HIGHLIGHTING the offering of the Buick Motor Div. for 1953 is a new V-8 engine for Series 50 and 70 models; and Twin Turbine Dynaflow drive, featuring a radically different type of torque converter. It now has a four-element unit with two turbines instead of the former five element assembly. Complete details will appear in a later issue. Buick also offers the long anticipated 12-volt electrical system in conjunction with V-8 engines.

The engine in the Series 50 and 70 is a 90

degree overhead valve V-8 which features a large bore of 4 in. and a short stroke of 3.2 in. Displacement is 322 in., with 8.5 compression ratio. The main difference between the engines for the Super and Roadmaster is in the induction systems. The Super is equipped with a two-barrel carburetor and the Roadmaster has a modified version of the four-barrel carburetor. Complete engine details will be described at a later date.

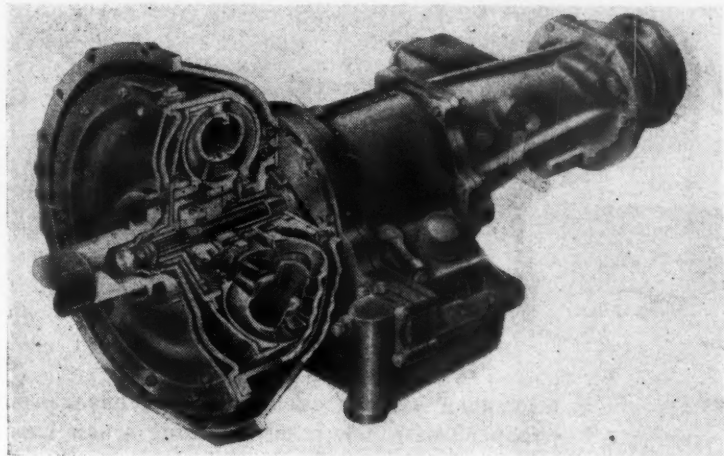
Additional features include: hydraulic power



Above. Combustion chamber arrangement for the V-8 showing piston dome and valve location.

Left. A line drawing of the new engine, which has a larger bore than stroke.

Below. This cutaway view of the Twin Turbine Dynaflow shows the four-element unit with two turbines.



steering, now offered as optional equipment on all series; air conditioning as optional equipment on all closed models in the 50 and 70 series; addition of a one-piece alligator hood, the first time for Buick; and availability of special wire wheel covers or inserts as special equipment.

The Series 40 engine remains the same with certain modifications which increase output to 125 hp with standard head of 7 to 1 CR and synchromesh transmission; and 130 hp with 7.6

to 1 CR when Dynaflow is specified.

Steering linkage on 50 and 70 models now is of the same type as on 1952 Series 40 and 50. However, to maintain the same steering geometry the center distance between the pitman arm ball and tie-rod ball has been increased by three inches.

Lighter pedal pressures and longer brake lining life are promised on Series 70 cars. Lighter pedal pressure is achieved by modifying shoe geometry of front brakes to increase the self-energizing action of both primary and secondary brake shoes. In addition, the adjusting strut has been raised

23/64 in. while the anchor pin location is lowered by 3/16 in.

The 12-volt generator has the same physical dimensions as the one used on the former Series 70, except for relocation of the mounting ears. It has a rated output of 30 amp. at 14 volts. Its rating is 420 watts as compared with 360 watts with a 6-volt system, this output being available to a somewhat lower speed.

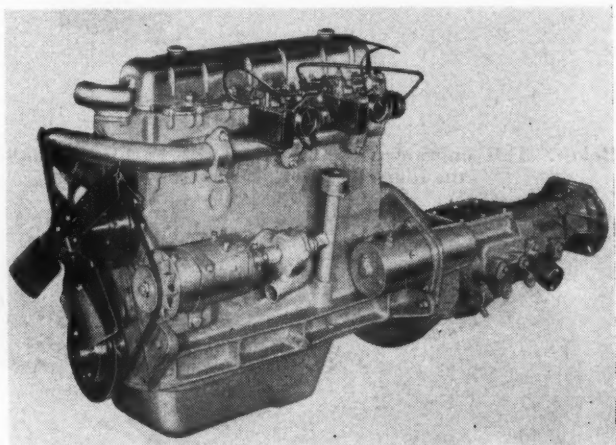
The distributor for V-8 engines was speci-

(Continued on page 106)



Left. The 1953 Nash Statesman "Country Club" hardtop convertible, a new model this year.

Below. The Lemans Dual Jet-fire engine, which is offered as an option on 1953 Ambassadors.



More Power for Nash

Statesman engine output is increased
and power steering is now offered as
optional equipment on the Ambassador

IN announcing its line for '53, Nash maintains the Pinin Farina styling introduced in 1952.

They are offering twenty-six solid and two-tone color combinations in the two lines. Heading the line is the new Country Club model in both Ambassador and Statesman which is delivered as a custom car. Other Ambassador and Statesman models include the two-door club sedan and the four-door sedan in both the Custom and Super series.

The body lines on the '53 Ambassador and

Statesman remain unchanged but have been enhanced with new trim, including a new hood ornament. Both the Ambassador and Statesman Country Club hard-top convertible models offer leather and needlepoint upholstery combinations.

Many changes have been made on the engine and chassis. The new engine for the Statesman offers 13 percent increase in horsepower. Power steering has been developed jointly by Nash engineers and Bendix and is offered in the Ambassador for the first time. The Statesman Powerflyte engine has a horsepower increase from 88 to 100, and shows greater fuel economy at certain speed ranges.

The horsepower was gained through various
(Continued on page 110)



The plastic-bodied sportscar, while not made by Willys, is available on a Willys chassis through W-O dealers.

New additions to the regular Willys line are a four-door sedan and a "hard-top", the Aero Eagle

INTRODUCED with the Willys Overland line for 1953 are the 4-door sedans, first of which is to be the deluxe Aero Lark; the Aero Eagle Hardtop; and a new style series, the Aero Falcon. Also available from the Willy dealers will be the Wildfire, a plastic bodied car with Willys chassis elements. This car is being built by Woodill Motor Co., Inc. of Downey, Calif., for sale through Willys dealers. The laminated fibre-glass bodies are purchased from Glasspar Body Co., of Santa

(Continued on page 203)

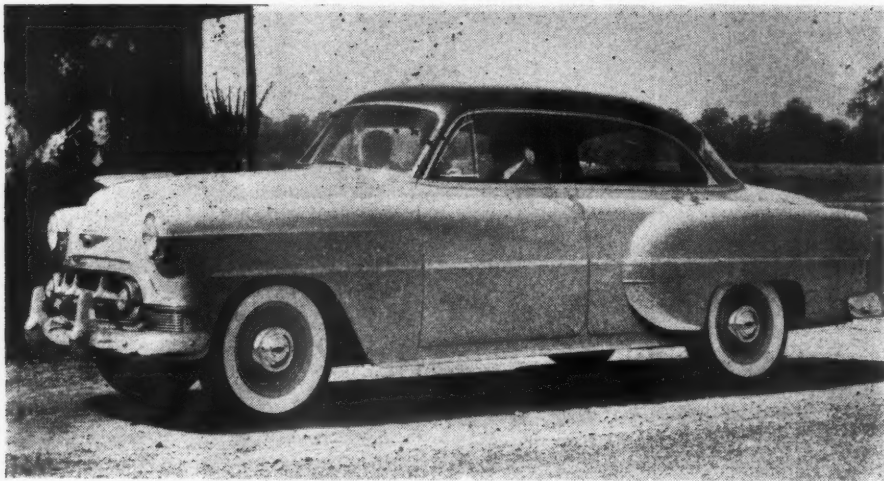
A Plastic Body for Willys' Chassis



A new body style in Willys' line is the Aero Eagle hardtop convertible, shown above. Note the one-piece windshield and wrap-around rear window.



At the left is the first four-door Willys since before the war. The model shown is the Aero Lark, with the "Lightning 6" engine.



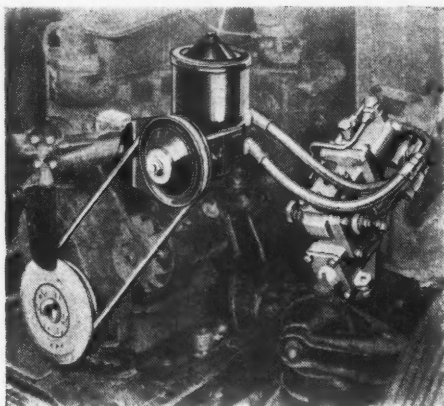
Improved vision, new body lines and re-styled grille identify the new Chevrolet. Shown here is the "Two-Ten" sedan.

Chevrolet Redesigns



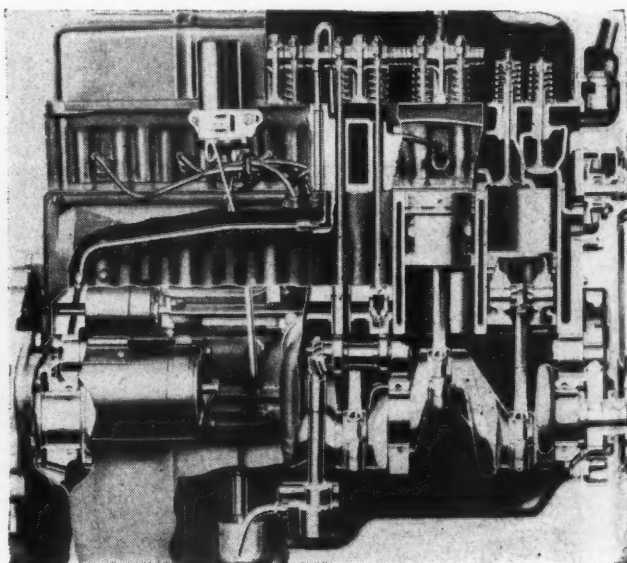
Above. Front-end styling is changed. Hood extends farther forward before curving to the grille.

Below. Shown here is the hydraulic steering mechanism. Note location of pump and actuating unit.



Body

Chevrolet's new engine delivers 115 hp at 3600 rpm. Aluminum pistons and pressure-feed oiling system are new features.



CHEVROLET has expanded its line to include a third series of cars. The bodies have been completely redesigned, and all cars have increased power, with special emphasis on a new power train that includes a new engine and improved automatic transmission.

The new series, to be known as the Bel Air, are to be produced as two- and four-door sedans, a convertible and sport coupe. The Bel Airs are included in the choice of 16 Fisher body types. Other passenger car series are designated as the "Two-Ten" and "One-Fifty."

A new 115-horsepower "Blue Flame" engine and a refined Powerglide automatic transmission have been re-engineered for greater operat-

ing economy and faster pickup. The so-called "standard" engine moves up to 108 horsepower.

Power steering, which reduces manual effort yet maintains traditional steering safety, is now offered. Another innovation is the Autronic Eye, an electronic mechanism that automatically lowers headlamp beams for passing.

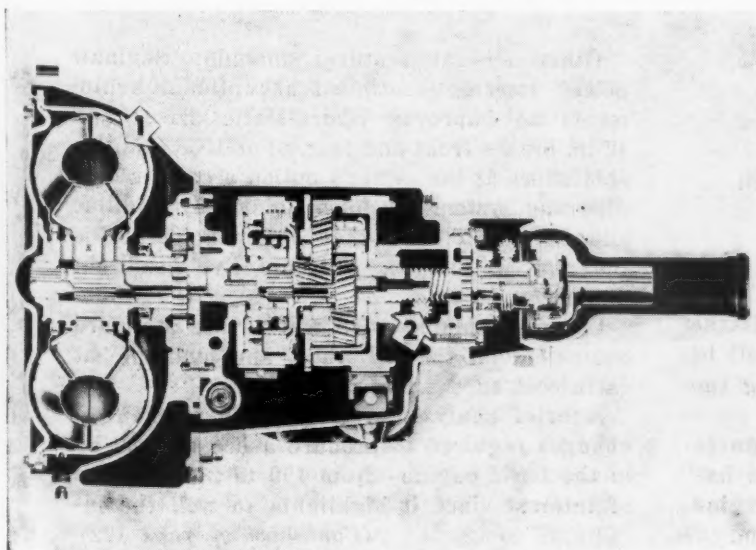
Roomier and stronger bodies with expanded visibility are featured. All have curved, one-piece windshields from which the center divider has been eliminated. Other body construction changes include front swingout door hinges to provide easier entrance; fold-away front seat backs in two-doors; and wrap-around rear windows.

In the standard engine the bore and stroke has been changed from $3\frac{1}{2} \times 3\frac{3}{4}$ to $3\frac{9}{16} \times 3\frac{15}{16}$. Displacement of 235 cubic inches stands against 216 in the 1952 passenger cars. Compression ratio is up from 6.6 to 7.1. Rear axle ratio is 3.7 to 1. Horsepower peak of 108 is reached at 3600 rpm.

In its expanded line for '53, Chevrolet offers restyled bodies, more power, an improved Powerglide and power steering

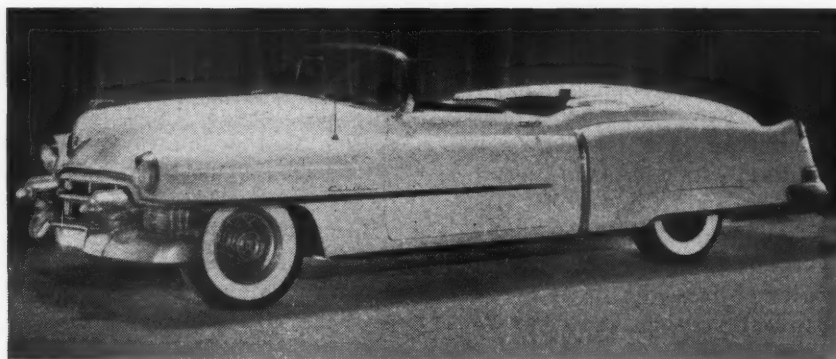
Engine — and — Transmission

This cross section of the redesigned Powerglide shows the torque converter (arrow 1). Arrow 2 shows the governor drive.



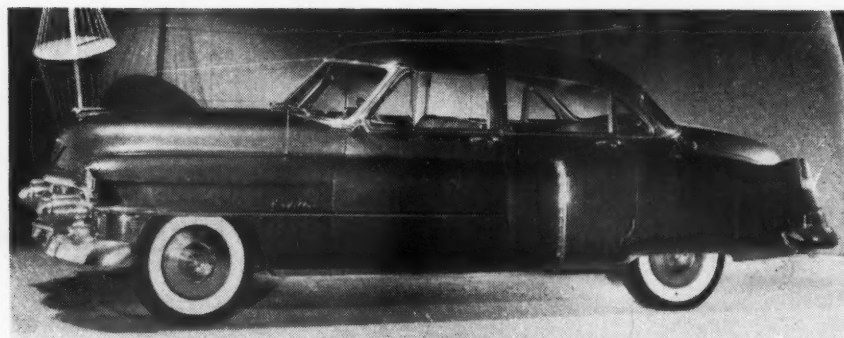
To provide the higher voltage at the spark plug gaps as required by the higher compression, the ignition system incorporates a high tower distributor and new distributor cam. Spark plug nipples guard against current leakage and condensation, aiding damp weather starting. New non-metallic resistance-type high tension cables replace certain copper wires. The core of the cable is linen impregnated with an electrical semi-conducting material, and has a neoprene outside jacket.

More complete and uniform cooling of the cylinder barrel comes from a lowering of the water jacket on the right side of the engine in the region of the valve lifters. A by-pass is included in the system



A completely new car in the Cadillac line is the El Dorado, measuring only 58½ inches in height. The Orlon top is concealed when lowered by a metal cover.

Cadillac Boosts Its Power



The Model 62 sedan, with a 210 hp engine having 8.25 to 1 compression ratio. Notice the refinements in front end styling.

Horsepower is up to 210 on the new engines. Many advantages are claimed for their newly-adapted 12 volt system

LEADING the Cadillac line for 1953 is the new ElDorado convertible which will be produced in limited quantity during the model year.

Most dramatic of the mechanical features of the line is found in the engine which has been modified to produce 210 bhp. The engine also boasts a new 12-volt electrical system.

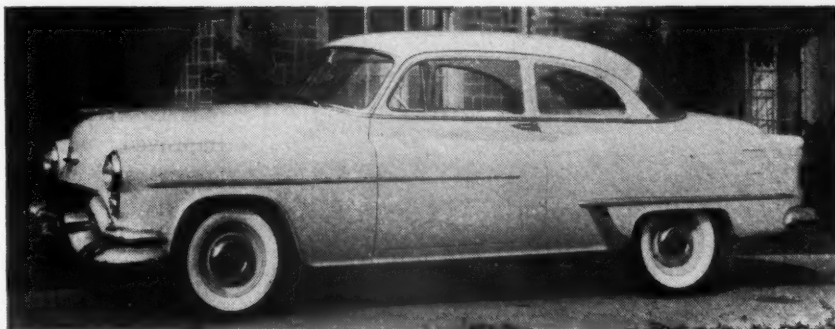
Other special features include: Saginaw power steering continued as optional equipment; an improved Hydra-Matic drive; and 12-in. brakes front and rear. For 1953 Cadillac also offers at the owner's option a car air conditioning system developed jointly by Cadillac and Frigidaire. Another optional feature is the now well-known Autronic Eye headlight dimmer.

Chromium-plated wire wheels are standard equipment on the ElDorado, and available at extra cost on the rest of the line.

A brief analysis of the simple mechanical changes required to produce a boost of 20 hp in the basic engine—from 190 to 210—will be of interest since it highlights so well the in-

(Continued on page 122)

Olds Offers Air Conditioning and 12 Volts



Oldsmobile's lowest priced car for 1953 is this Deluxe "88" two-door sedan.



The Super "88" Holiday coupe is shown above. A new silhouette is provided by higher rear fender crown and rear deck contour.

IN its 1953 line of cars, Oldsmobile offers some important engineering features, including: 12-volt ignition on all models; Bendix power brake as optional equipment; Frigidaire air conditioning as optional equipment; turn signal standard equipment all models. GM Saginaw power steering and the Autronic Eye, first offered last year, are continued as optional equipment.

Apart from the special items mentioned above, the basic mechanical features and wheel-base remain unchanged, except as noted below. Although engines for the three basic models remain unchanged mechanically, compression ratio has been increased to 8 to 1 across the board, lifting the rating on the Super 88 and the 98 to 165 bhp, and to 150 bhp on the Deluxe

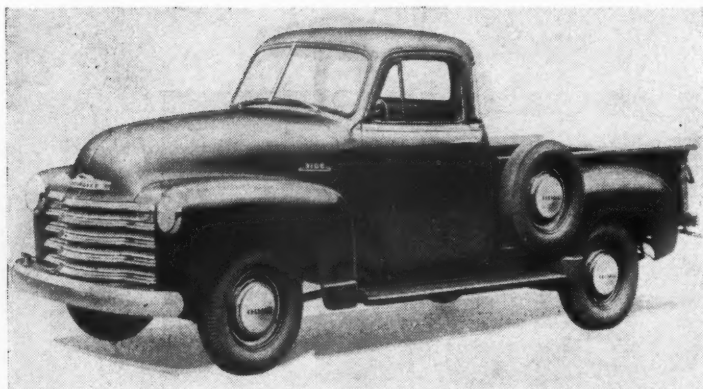
More power, 12 volt electrical and ignition systems, Autronic Eye and power brakes are among '53 features

88. The new 12-volt electrical system, including an 11-plate 12-volt battery, has been adopted as standard equipment.

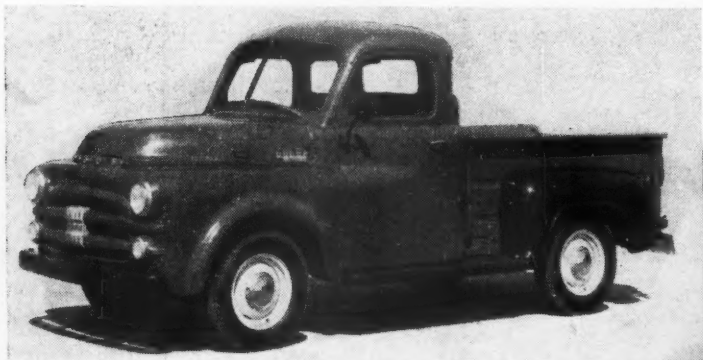
Front tread has been upped to 59 in., from the former 58 in. The front spindle has been changed to accommodate larger diameter front wheel bearings.

(Continued on page 114)

New Trucks for '53

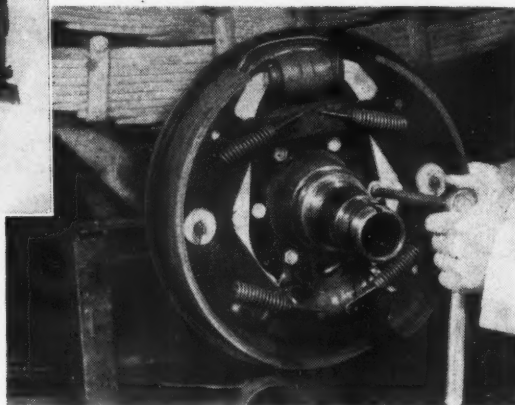


Chevrolet offers its 1953 pick-up truck in three body lengths with maximum payload capacities ranging from 1,500 to 2,900 pounds. It is shown above with the new side-mounted spare wheel carrier.



New Dodge pick-up models (above) are available with the Truck-O-Matic transmission, the truck version of the M-6 transmission with Fluid-Drive.

Shown at right is the new dual-primary type rear brake used on the 1, 1½, 2 and 2½ ton B-4 series Dodge trucks.



Dodge offers Truck-O-Matic . . .

INCREASED power, three new engines, improved brakes, and a self-shifting transmission for some light models are among new features in the new B-4 Series of Dodge "Job-Rated" trucks.

The new Truck-O-Matic transmission with gyrol fluid drive available for ½ and ¾-ton models brings this convenience to the truck field for the first time.

Largest of the new engines is that which

powers the 4-ton models. It has a displacement of 413 cubic inches, compression ratio of 6.5 to 1, and develops 171 gross horsepower at 3200 r.p.m. It is equipped with twin carburetors, manifolds and exhaust systems.

New rear fenders have been introduced on all pick-up models. A new ½-ton pick-up of 56 cubic feet capacity with 116-inch wheelbase has been added to the new line. It has a high side box as

(Continued on page 202)

Chevrolet's new pick-up trucks . .

THE Chevrolet truck line for 1953, increased to a total of 74 models on 11 wheelbases, features improved performance, stronger frames and axles and better braking.

Offered in the latest truck models are two engines of the valve-in-head design. The Loadmaster, standard in some of the models and optional in others, has been increased in power for 1953. The Thriftmaster, also improved at several points, is standard on the lighter trucks.

(Continued on page 202)

Vibration on Chevrolet Is Hard to Locate

I have a 1949 Chevrolet that has a vibration at 55 to 60 mph. This cannot be felt at the wheel but it is sort of a rumble. It can be heard whether pulling or coasting against the engine. It has had the transmission overhauled, the wheels balanced and the mounts tightened.

The owner has had it worked on by several garages but no results. We analyzed it as a worn drive shaft bushing and replaced it but after one day it is back again.

*Walter Steiner
Walt's Repair Shop
Kit Carson, Colo.*

SINCE the noise disappeared for a day when replacing the drive shaft bushing I think you have isolated the trouble to that spot. I would suggest installing a new bell housing and retainer. When bolting the retainer to the transmission make sure the bell housing has a shaft drag inside the retainer. These retainers are adjustable by adding or removing the gaskets.

Sometimes the exhaust system sets up the vibration at certain speeds that sound like rear axle noise.

Mysterious Oil Leak From Chev. Powerglide

We have a 1950 Chevrolet Powerglide and have to keep adding oil to the unit. We put it up on jacks and ran it in neutral, drive and low position, with and without setting the hand brake and watched it. Still we couldn't see it leaking or dripping any place. The oil must be going some place? Maybe someone else had this trouble and you might be able to tell me how to solve the problem?

*Steve Turick
Ford City, Pa.*

SINCE you cannot see any oil dripping or damp spots around the assembly, the only other place it might go would be into the differential or possibly sucking it into the intake manifold.

Checking the lubricant level in the rear axle will determine if the oil is getting through the torque tube. To eliminate the leak, it will

(Continued on page 102)

READERS CLEARING HOUSE



by Jack Montgomery, Technical Editor

- Chevrolet has a vibration
- Mysterious powerglide oil leak
- Working on hydraulic valve lifts
- Modifying a Ford for dirt track
- Replacing overdrive snap ring

In the stock car class, Lincolns took the first four places, while Mercedes Benz cars were first and second in the sports car division



AAA champion Chuck Stevenson and his co-pilot, Clay Smith, with their 1953 Lincoln after coming in first in the stock car division.

American Cars Shine South

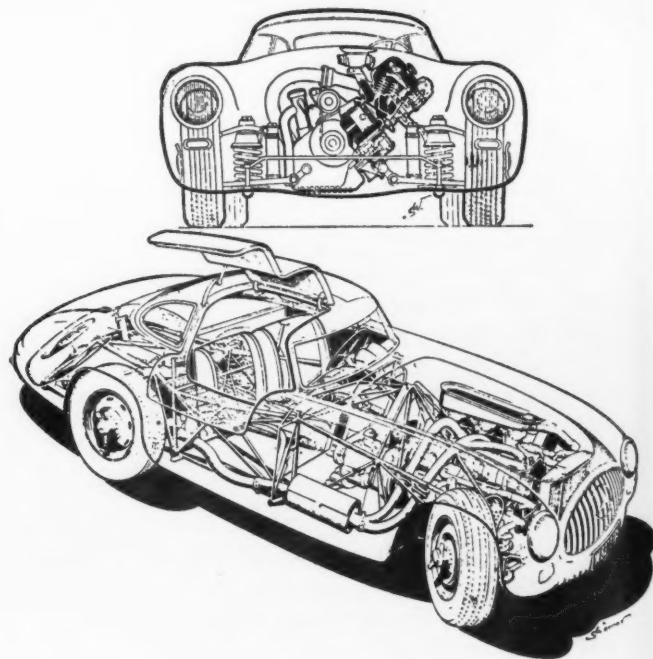
FIRST place in the stock car division of the Third Annual Pan-American road race was taken by Chuck Stevenson, AAA racing champion for 1952, driving a Lincoln. Stevenson, whose prize money totaled \$11,628, paced a field of Lincoln drivers who took the first four places in the stock class. His 90.93 mph average set a new record.

Johnny Mantz, Walt Faulkner and Capt. Bob Korf finished in second, third and fourth places, while Reginald McFee, driving a Chrysler, took fifth place.

A Mercedes-Benz, driven by Karl Kling, of Stuttgart, Germany, won first place in the sports car class. Its average speed was 102.6 mph, compared with last year's top of 88.09 mph.

Stevenson, Mantz and Faulkner, all veteran Indianapolis drivers, disclosed that Clay Smith supervised their cars throughout the race. Smith said that there was no mechanical trouble with any of the winning Lincolns. He said that most of the cars which dropped out for mechanical

(Continued on page 134)



At the top is a view of the Mercedes Benz 300 SL showing the 45 degree angle mounting of the engine. Location of main components is shown above.



Karl Kling's Mercedes Benz crosses the finish line to take first place in the sports car class.

Below. Germany's Karl Kling and Hans Klenk shake hands after winning their class with a 102.59 mph average.



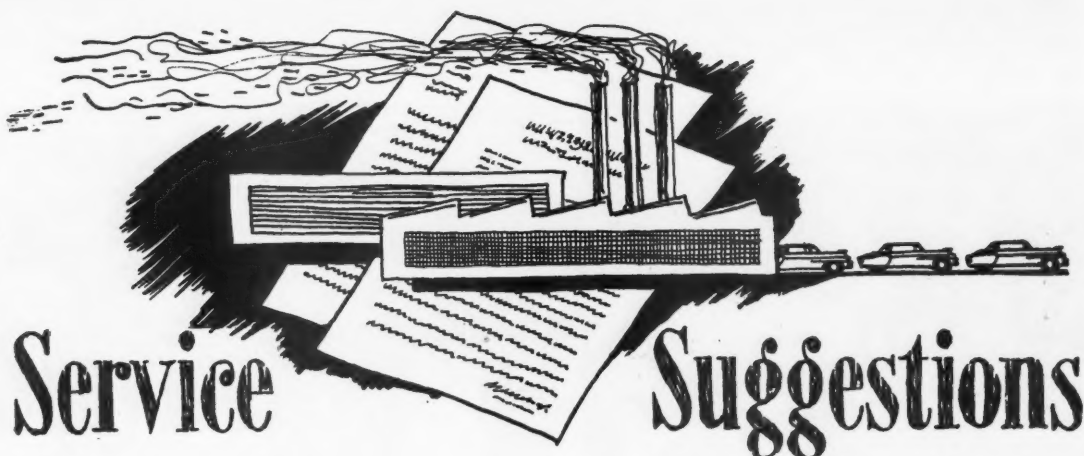
h of The Border

Mexican driver Hector Riva Palacio was injured when he failed to negotiate a bridge and hit five parked cars with his Oldsmobile.



Below. Ruiz Echevarria, Mexico, escaped injury when his Ferrari overturned.





Service

Suggestions

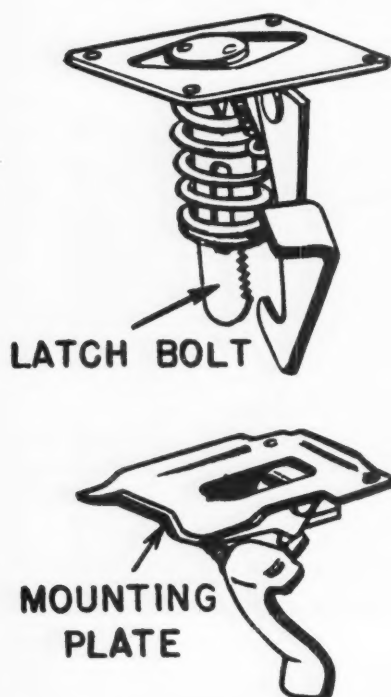
— From the Factories —

Correcting Hard Hood Latch Operation on Willys

There have been reports of hard operation of the hood locks on Willys passenger cars. This difficulty may be caused by binding of the hood latch bolt against the side of the lower hood latch mounting plate. This binding could be due to improper centering of the lower hood lock assembly. This condition can easily be corrected as follows:

(1) Loosen—do not remove—the four attaching screws of the lower assembly.

(2) Lower the hood and carefully engage the lock. The latch bolt will center the lower assembly.



(3) Carefully unlatch the lock, lift the hood, and tighten the four screws.

New Hydra-Matic Pressure Plug For Pontiac

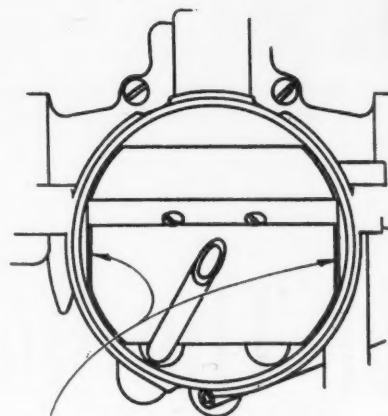
An improved pressure regulator assembly is now available for use on Pontiac Hydra-Matics. The factory points out that as soon as possible only the new type of plug will be used. The new plug assembly



incorporates a dampener spring in the reverse booster plug as shown in the illustration. This spring aids in stabilizing front pump pressure. The new plug assembly is used with the same pressure regulator valve and spring as the earlier type and is interchangeable with the early type pressure regulator plug assembly. Be careful when installing the new assembly to make sure that the regulator valve dampener spring does not fall from the reverse booster plug. It's a good idea to give a liberal coating of vaseline to the inside and outside surfaces of the plug to hold the complete assembly together while it is being installed. If these parts are not held in place during assembly they may become damaged when the regulator plug is tightened.

Choke Modifications on 1951 Studebaker Commander

On some early Studebaker 1951 models, the ones equipped with



FILE THESE SIDES AS REQUIRED TO PROVIDE CLEARANCE

Stromberg AAUVB-26 carburetors stamped with code 6-111, there was an interference between the air horn body and the carburetor choke valve. The factory points out that this condition became noticeable usually in extreme cold weather due to abnormal contraction of the body. The interference may be at either side of the choke valve near the part that is attached to the shaft. The interference may be eliminated by loosening the two choke valve-to-shaft attaching screws and shifting the valve away from the housing sufficiently to allow it to move freely.

Parking Brake Cable On 1952 Ford Cars

A new parking brake cable assembly is now available for 1952 Ford cars. The assembly is said to be shorter and will prevent the conduit from rubbing the rear tires. The assembly is available for service and is interchangeable with previous parts.

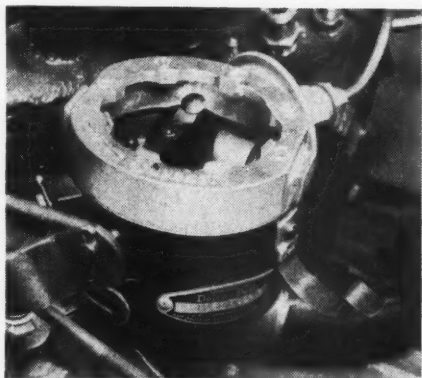


MY MODERN MAINTENANCE MANUAL



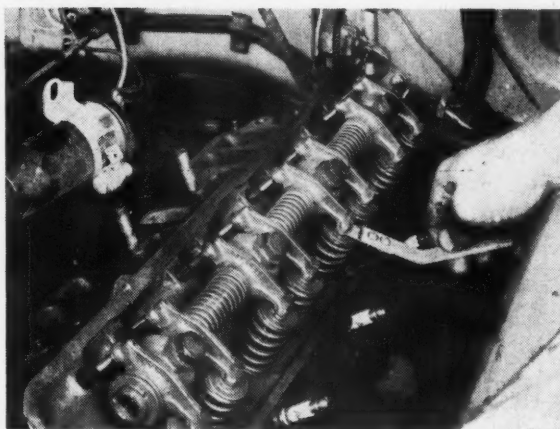
Add to your Know-how and
you Fatten your Bankroll
says Jack Montgomery
Technical Editor

Quick Tests on Hydraulic Lifters

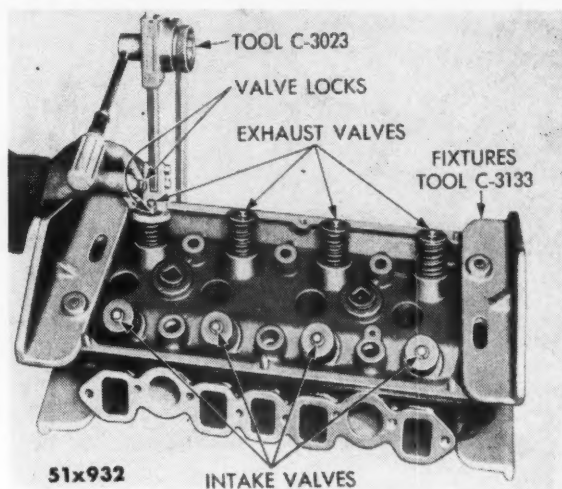


Special tool for checking hydraulic valve lifter action on Cadillac engines. Insert gage with valve in closed position. If lifter is faulty, gage will pull out without any resistance. ↓

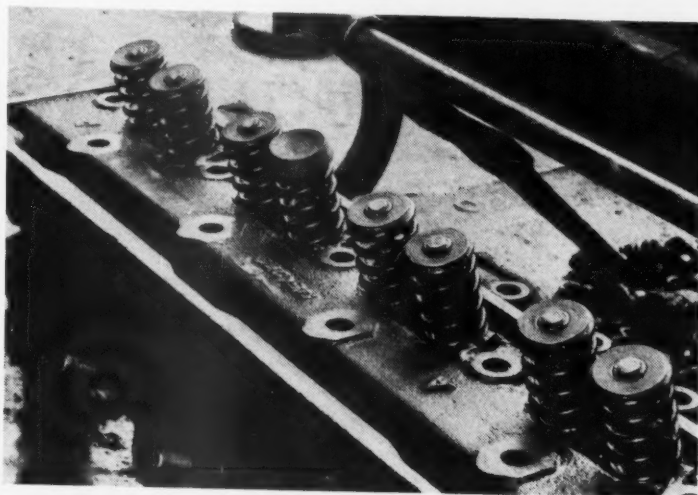
↑ When making initial tappet adjustment replace distributor cap with special cylinder indicator gage. Rotate the engine until the rotor lines up with the number on the indicator. The piston will be on dead center with both valves closed.



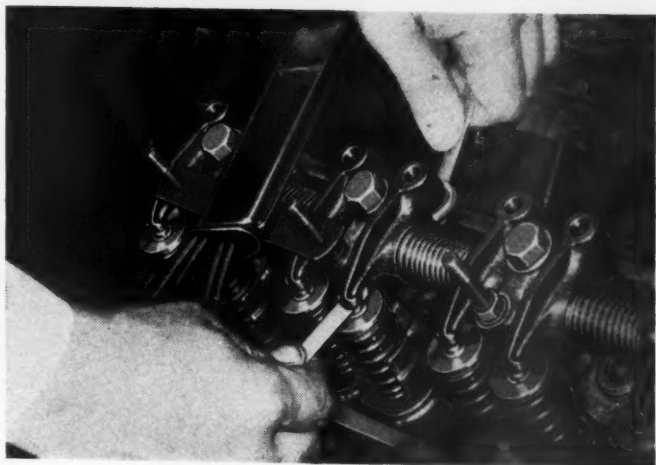
Special tool in position for removing valve keepers on Chrysler V8 engine. →



A quick check for leaking valve cap seals on Cadillac engines can be made by placing a wheel cylinder cup on the valve retainer. If seal is good, suction will remain indefinitely. —>

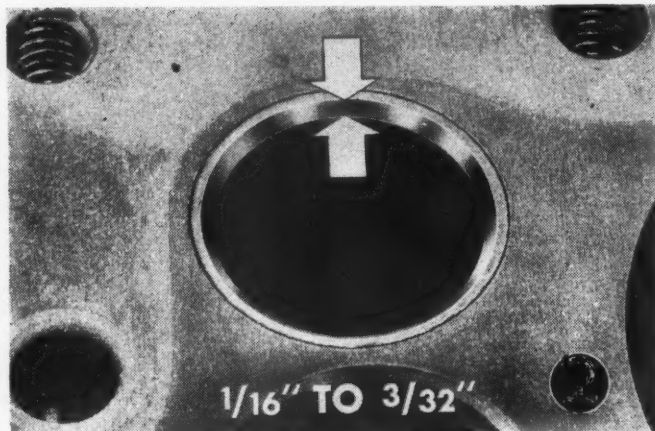


← When doing a ring job, always check piston fit and have them resized if necessary.



← Adjusting tappets on Studebaker V-8 engines. Hydraulic lifters are not used in these engines.

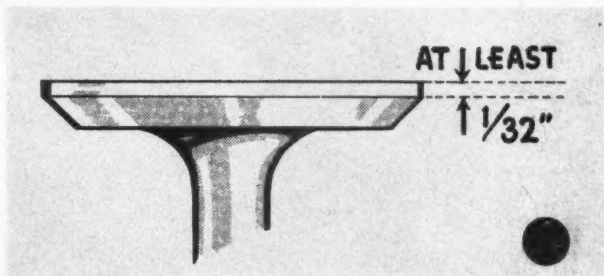
Guide for Precision Valve Work



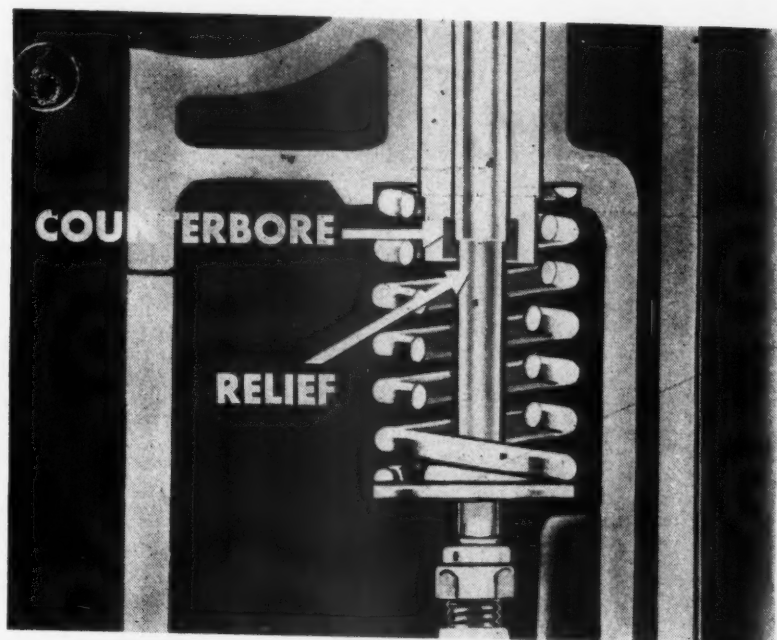
Before refacing valves examine the head margin. Valve should clean up to leave at least $\frac{1}{32}$ inch between the top of the face and the top of the head.



↑ Valve seat width should be from $\frac{1}{16}$ to $\frac{3}{32}$ inch to provide long valve life and proper heat dissipation.

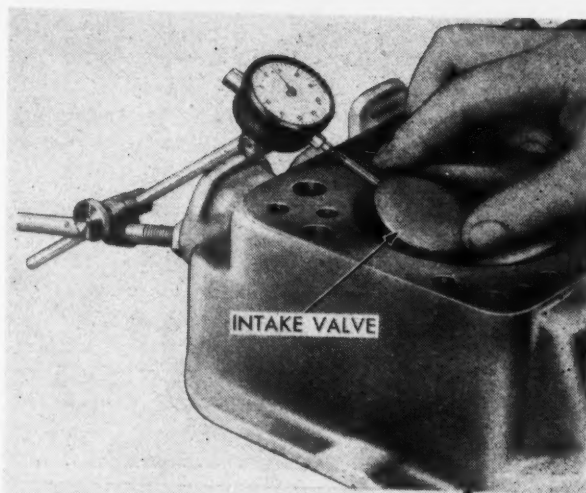


← To prevent exhaust valves from sticking the valve guide should be counterbored. This can be done by using a larger drill than the valve stem size.

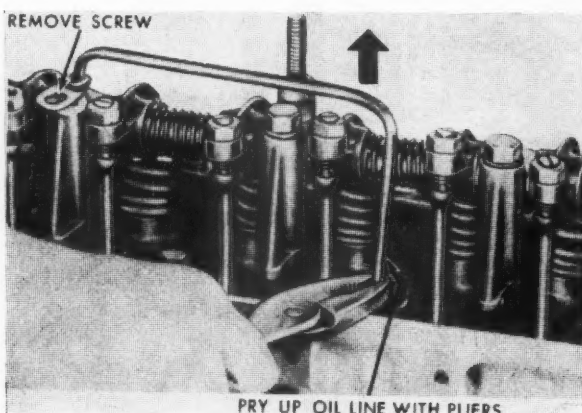


Intake valve guide ↑
should be counterbored
on the lower end to
prevent valves from
sticking.

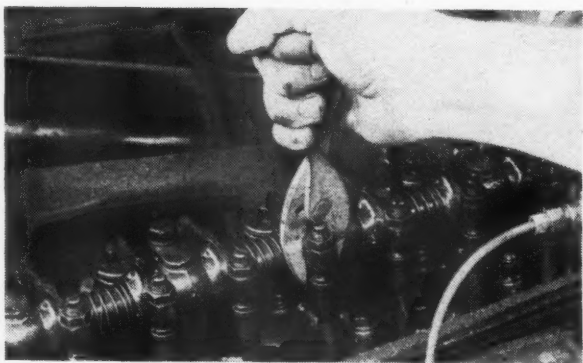
Valve guide wear should
be checked with a
dial gage. Allow .007
on the intake and
.015 inch on the
exhaust valve on
Chrysler V-8. →



High Spots on Tricky Engine Jobs



← To remove the rocker arm oil feed tube on six cylinder overhead Ford engine take out the screw in the bracket and pry up the opposite end.

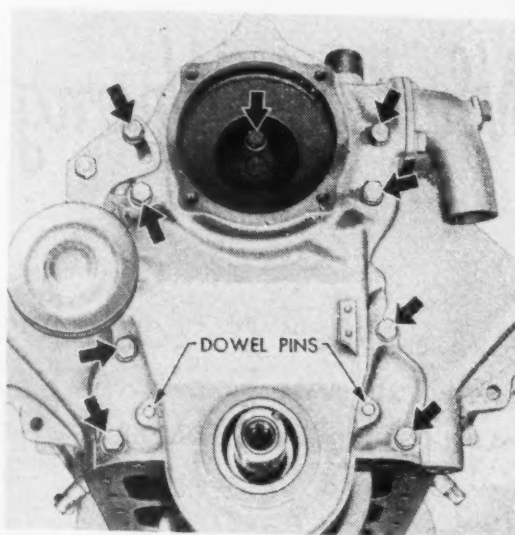


To find a faulty hydraulic lifter. Place piston in firing position, then take a pair of pliers to pull down on push rod. If little or no resistance is felt, remove the lifter for inspection.

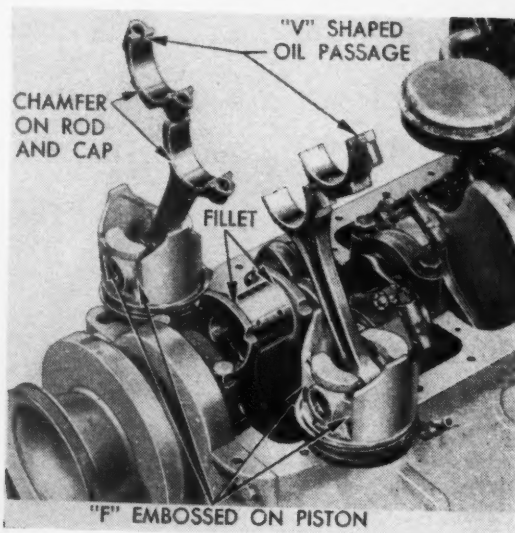
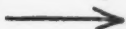
The automatic choke cover should be removed periodically to clean the soot that accumulates from the exhaust head. →



To remove the timing case cover on Chrysler V-8 it is necessary to remove the water pump for access to one of the cap screws.



When assembling rod and piston assemblies in a Chrysler V-8 engine the points indicated by arrows should face the front of the engine.

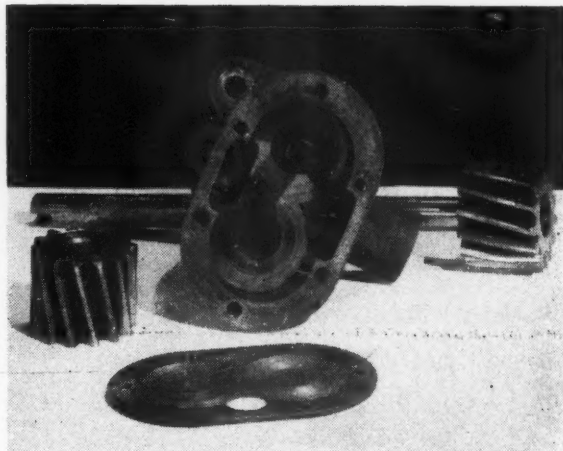


Always check the oil flow to rocker arms on Buick engines. This line must be kept clean as it supplies the hydraulic lifters

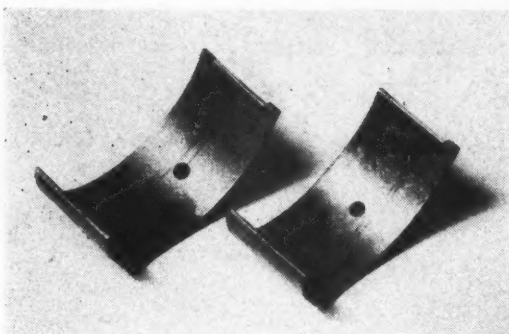


What Goes Wrong Inside an Engine

Don't overlook the oil pump when diagnosing low oil pressure complaints. Note how the various parts are worn in the photo at right. —→

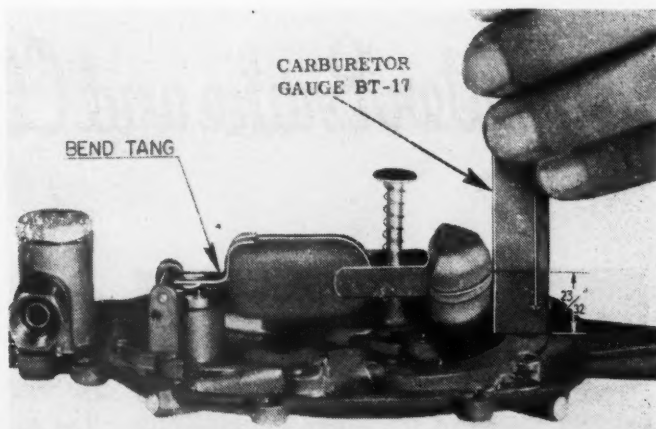


Fuel and vacuum pumps should be inspected periodically to avoid complete failures. —→



← Bearings that are no longer serviceable due to using dirty oil or not renewing the oil filter at recommended mileage.

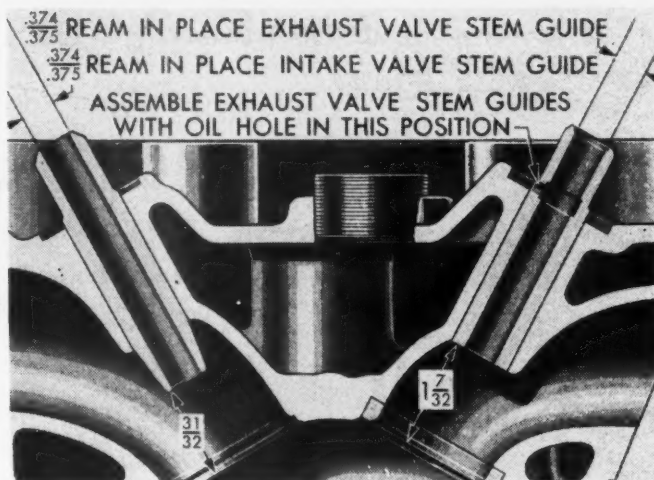
The float or fuel level should be checked on every tune-up job to insure maximum performance. →



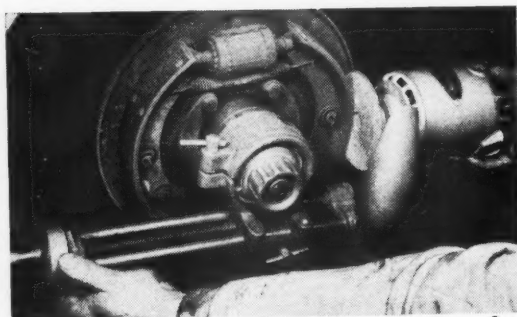
Using rust inhibitors and flushing the cooling system at least twice a year will prevent the rust and scale condition shown at right. →



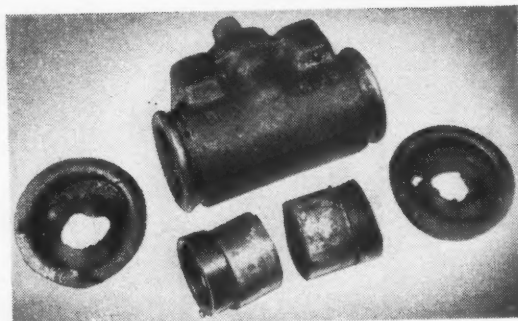
When installing valve guides in Chrysler V-8 engines follow the procedure and dimensions outlined at right. →



For Better Brake and Clutch Service



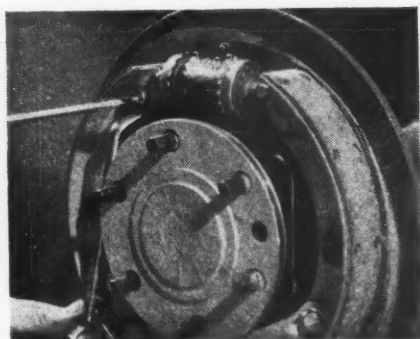
To correct brake squealing and grabbing use a grinder to insure full shoe contact with the drum.



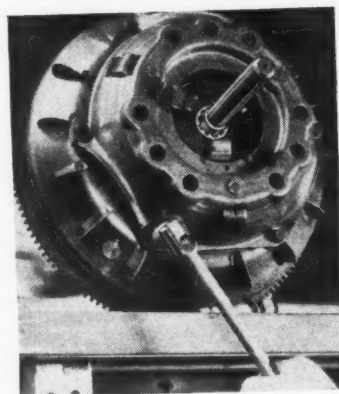
Cleaning and flushing the brake system seasonally and using accepted brands of brake fluid will make parts last longer.

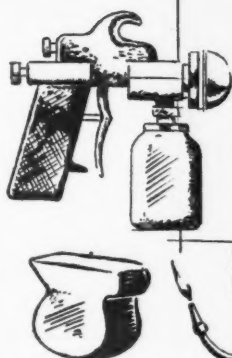


Adjusting the eccentric bolt on Chevrolet Truck brakes. This adjustment is important to obtain a good parking brake.

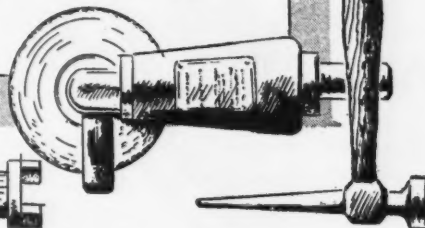


When installing clutches always use a pilot shaft to line up hub with pilot bearing making transmission installation easier.





BODY SHOP TIPS



Masking Tape Keeps Screws From Getting Lost

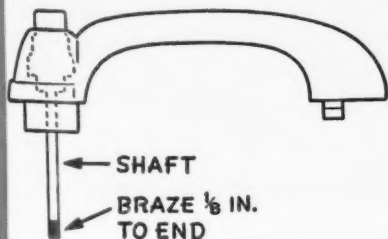
When a job calls for the removal of several moldings or parts, we use a piece of masking tape to stick the screws together. We tape the screws tight onto the part from which it came or the new part itself. In this way they can be put back without fishing around in the can to find the right screw or bolt for the right part. It's a lot safer and in the long run saves time. *Bill Smith, Smith Auto Rebuild, 205 Liberty Street, Lynden, Wash.*

Masking Tape on Sharp Edges Saves Wrists

When working on door panels from the inside, the framework is often rough with sharp edges. To play safe, we strip a little masking tape around the edges to protect the hands and the wrists. The few minutes involved in doing this far offsets the possible results from cuts from these ragged edges. *Munro Auto Body, Du Bois, Pa.*

Door Handle Repair On General Motors Cars

I have found trouble on G.M. cars from 1949 up that sometimes occurs on door locks. When the outside



push button is pushed in, the lock releases only half way. My first ex-

BODY SHOP TIPS are worth

\$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

perience with this trouble caused me three hours of wasted time and labor. The cause is generally due to excessive outside door panel curvature (probably due to body work after an accident). When the button is pushed in, the shaft on the door handle is too far away to make complete contact with the lock. Thus a lock opens half-way. I remedy this situation by raising 1/8 inch of rod on the end of the shaft and then filing it smooth. This has been successful on all cases so far. *John Meloni, 92 Millen Street, Framingham, Mass.*

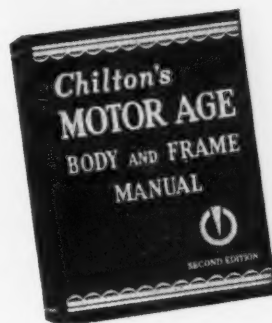
Here's a Good Way to Hook Chevrolet Hood Springs

In the past few years I have seen so many different methods and tools used to hook the hood hinge springs on the Chevrolets that I want to tell of my new idea. After covering the fenders simply lay the hood on the car about 6 or 8 inches ahead of the normal closed

position. Reach in from the back and hook the hood hinges, with the spring intact, to the hood on both sides of the hood. Then with a little help the hood can be raised and forced back into position so that the other hinge can be hooked. No special tools, no broken fingers, no scratches on the customers' cars and it really works. *Virgil Dye, Lincoln - Mercury, Marshalltown, Iowa.*

Metal Tag on Cowl Identifies Paint Job

In our shop, an aluminum tag, 2 in. x 3 in., stamped with the paint number, brand of paint, and date is fastened with two small screws to the body cowl under the hood at the time we repaint a car. This helps us in cases of spot painting or fender touch-up. The saving of time when one of our cars comes back for touch-up painting is well worthwhile and certainly reduces the chance of getting a mismatch on spot jobs. *Elton Lambert, Bemis Chevrolet, Inc., Plainville, Kan.*



Other valuable information of the type presented each month in The BODY SHOP is available in Chilton's Motor Age Body and Frame Manual.

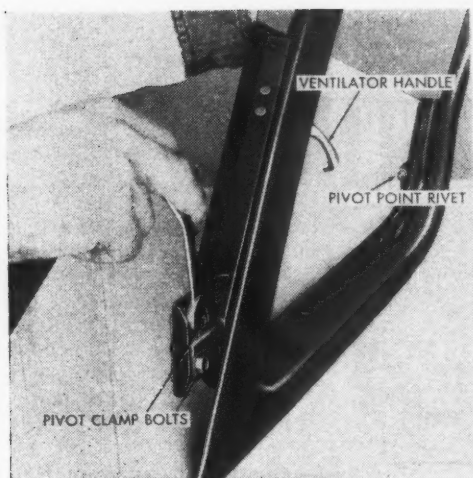


Fig. 1. Remove the vent assembly from the molding by loosening the pivot clamp bolts.

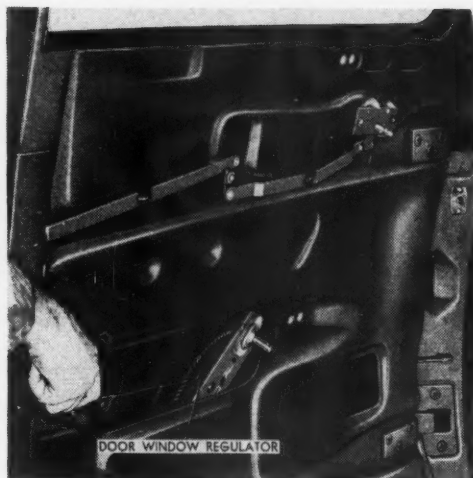


Fig. 4. Remove the four star washers and screws and take out the regulator assembly.

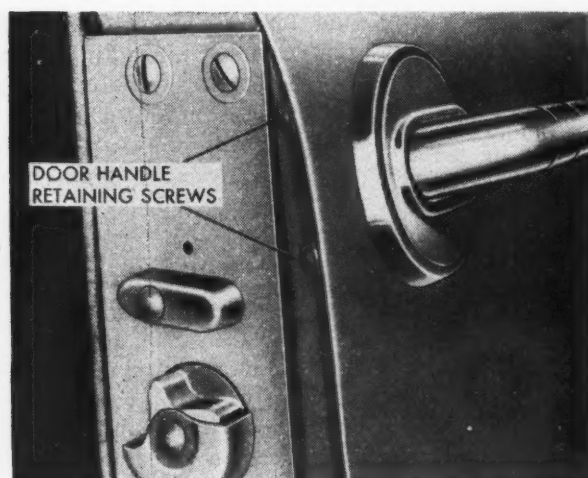


Fig. 2. Outside door handle is removed by taking out the retaining screws shown here.

Fig. 3. Hairpin clips which hold the regulator arm channel are removed with a punch.

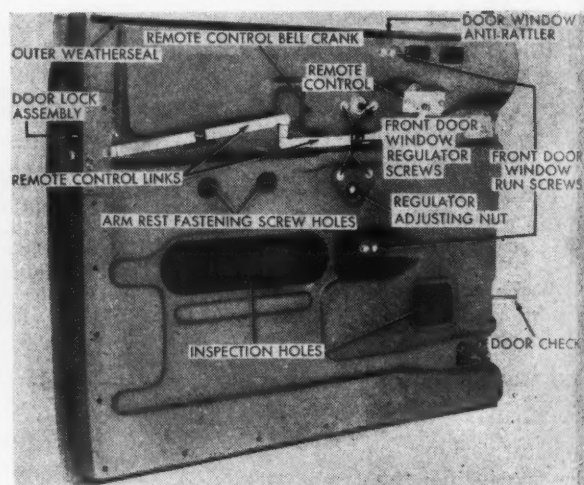
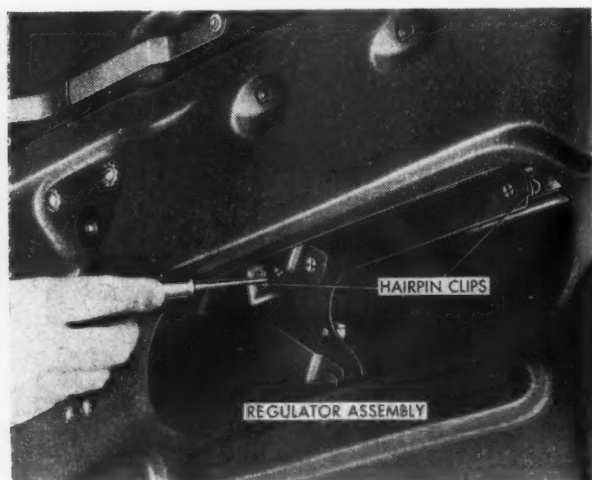
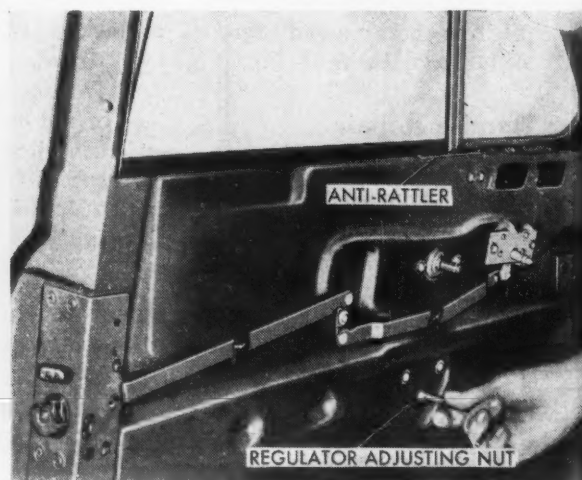


Fig. 5. View of the door assembly with all of the component parts labeled.

Fig. 6. Align the glass to fit the window opening using the regulator adjusting nut.



Here's some information which will be valuable to body men when working on Studebaker cars from '47 through '52

by Arthur H. Nellen, Jr., Service Editor

MOTOR AGE



BODY SHOP

STUDEBAKER

Body Service

FROM 1947 through 1949, Studebaker Champion, Commander and Land Cruiser bodies remained fundamentally the same; and on the 1950 through 1952 models, changes were mainly in the shape of the fenders, hood and grille. The service information given here applies to all models from 1947 through 1952.

When working on doors and window mechanisms, a great deal of time may be saved by

following the disassembly and service procedures given here.

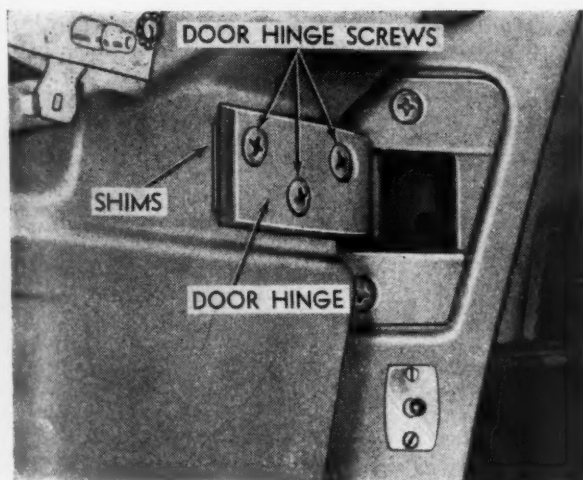
The door window garnish molding and ventilator assembly are removed by taking out the Phillips head screws which hold the garnish molding to the door. There is one screw hidden by the ventilator wing, and this can be taken out through an access hole in the rubber ventilator seal. When these screws are removed, the assembly can be lifted out in the usual manner.

In order to remove the vent assembly from the garnish molding, loosen the two lever pivot clamp bolts (Fig. 1) and drill out or cut off the top pivot

(Continued on page 158)

Fig. 7. Door is positioned by loosening hinge and shifting, or by adding shims.

Fig. 8. After moldings are off, windshield is removed by pushing from weatherstrip.



THE MG has done a great deal to encourage the sports car movement in America, although it is far from the ideal high performance car as it arrives from the factory. The basic engineering is sound, however, and handling and roadability characteristics are excellent. Since the power plant lends itself well to modification, the MG owner can have a high performance vehicle with a minimum investment in time and money.

More than 8000 MG's have been sold in the U.S.A., and interest in driving as a sport and road racing is spreading like an oil fire. More and more of these little cars are turning up at neighborhood garages, service stations and car dealers for servicing and competition tuning.

Specifically, here's what you can do and how you can do it to make a stock Mk II perform like

MODIFIED...

This is a step-by-step description of

a car with double the horsepower and pass the checkered flag at better than 100 mph.

The dope on a typical MGTD Mk II looks like this: Displacement—1250 cc; hp—64; compression ratio—8.6 to 1; power to weight ratio—31.1;



Fig. 1. Removal of hood sides, running boards, wind-shield, and other unnecessary items reduce the car's weight by 340 pounds.

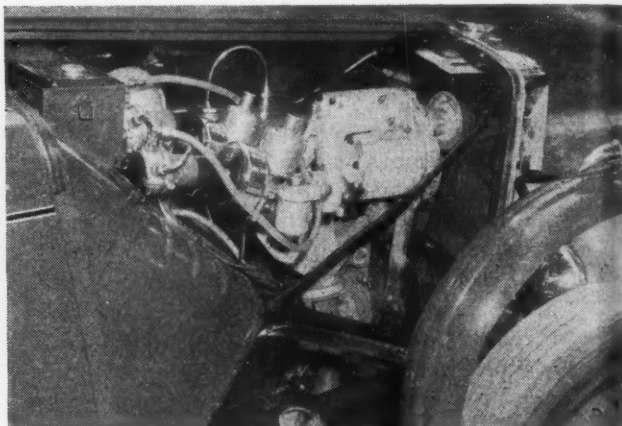
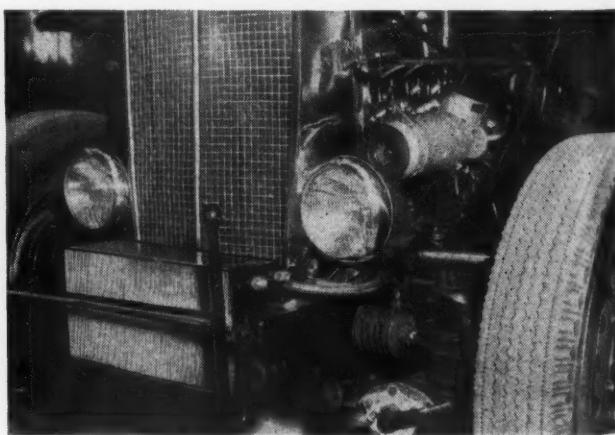


Fig. 2. View of the Roots blower. In this unit air is trapped by double lobes on two impellers and swept into the intake.

Fig. 4. Notice how the dual carburetors (with the chrome domes) are installed on the supercharger.



Fig. 5. The two-quart oil cooler, seen at the front of the radiator, was made from an aircraft intercooler.



For Competition

by Bryce Gray, Jr.

how an MG Mark II was "stripped down" and "souped up" for peak performance

speed—87 mph at 5500 rpm; acceleration—0 to 60 in 20 seconds; rear axle ratio—4.875:1.

Remember, these figures do not apply to a stock TD, for the Mk II has a slight edge over the stock TD with two fuel pumps, four friction

type adjustable shocks, larger intake valves with 150 lb springs, ports polished and relieved, higher compression, hotter coil, lower rear and larger carburetors. Thus make sure your customer has the Mk II before you start.

The first step is to lighten the basic car as much as possible and still comply with the rules recognized by the leading Clubs that are conducting competitive events today. Obviously, tools, mats, top, chrome and accessories must come off, as well as hood sides, bumpers, fenders, running boards and seats. Now you'll need a spring loaded hood strap, cycle fenders and "nerfing bars," which we made from $\frac{5}{8}$ -inch moly thick walled tubing with a ball welded on top as shown in Fig. 6. Aircraft type bucket seats were not yet installed when this picture was taken, nor was our louvred aluminum hood ready. Two-inch smaller headlights were put on and radiator louvres were replaced with $\frac{3}{8}$ -inch chrome mesh. At this point your car is 340 plus lbs lighter, acceleration is now 0 to 60 in 16 seconds, top speed up to 90, road handling and braking better with this weight removed.

Now you must go under the hood and either mechanically change or supercharge your I-head push rod engine. We decided on the latter for the following reasons:

Bore, Stroke—Did not want to alter the engine as resale value of car is affected.

Compression Ratio—Fuels used in races are provided by race committee, and blending is out. Anything over a 9:1 ratio doesn't seem to work out efficiently on race gas.

With a blower you can get most of the speed with more reliability, less cost and still use your standard cam. With both Vane and Rootes type superchargers available, we took a Rootes type as many of these Italian units are in use (Fig. 2) and parts are available. In this type blower the air is trapped by double lobes on two impellers and swept into the intake.

Here's a blow-by-blow description of what you

(Continued on page 131)

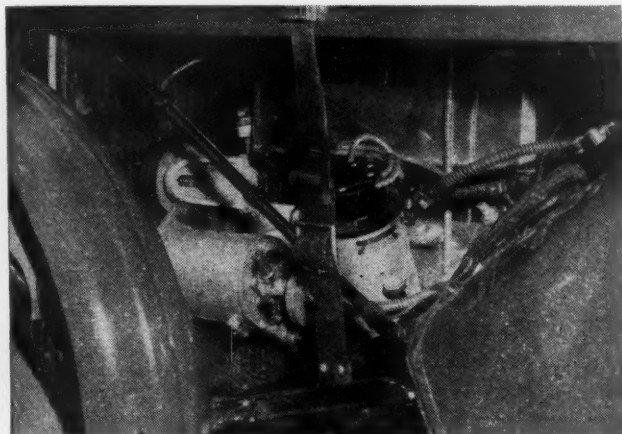
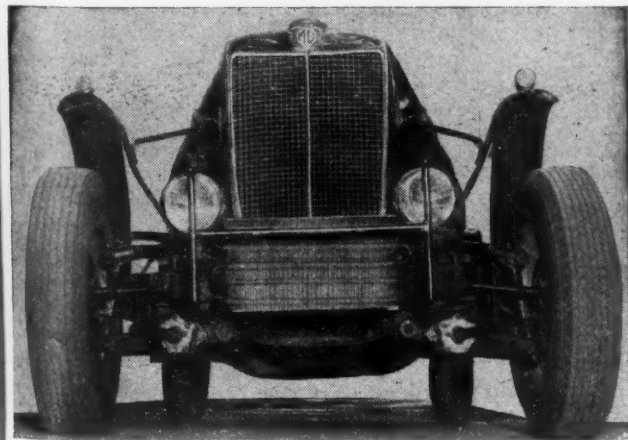


Fig. 3. This view shows the Scintilla magneto installation, a major contributor to increased power. Note the hood strap.

Fig. 6. Notice that two sets of shocks are used on this model. The racing-type fenders reduce weight.





Hot Tips on Hot Rods

Sports Cars Racing Jobs

by R. Raymond Kay, Pacific Coast Editor

SPORTS car enthusiasts greeted another unusual product of the Southern California car building shops—a Lincoln-powered Allard. Using the chassis and roadster body of the Allard, the builder incorporated several interesting design changes in suspension and power plant.

Front axle of the car is a Ford 1½-ton truck unit. In order to make possible independent front wheel suspension, this axle was divided and hinged. Spindles and other steering components are of Ford manufacture. Lockheed brakes are used with Al-Fin drums and plates of aluminum into which steel sleeves are shrunk. Brake linings in the car are racing type. Rear suspension is DeDion equipment.

The transmission is standard Ford three-speed with Zephyr gears. A Ford differential is fitted with a Cyclone quick-change assembly that permits 30 different gear ratios.

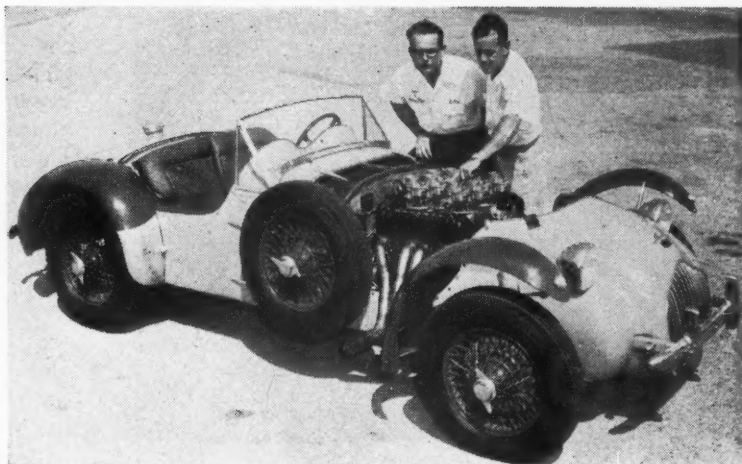
The Lincoln power plant in this car is a 1952 model with modifications designed by Ed Winfield of Los Angeles. Reboring changed the standard 317.5 cu in. displacement to 352 cu in. The pistons now measure 4 in. in diameter instead of the standard 3 13/16 in. Further modification includes the use

of eight carburetors, adapted from Ford-6 units. The camshaft is a reground standard Lincoln shaft.

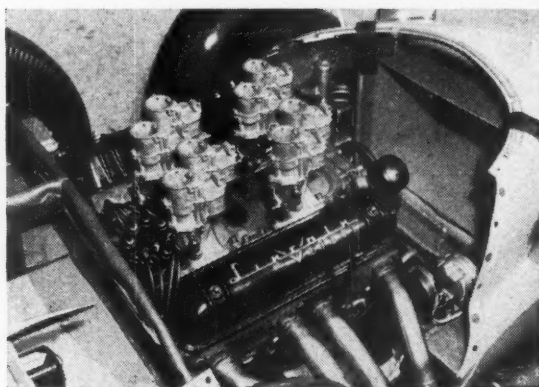
The engine is expected to develop 1 hp for every cu in. of displacement, according to Winfield. Using regular 91 octane

gasoline, the engine can be idled at 500 rpm and accelerated to a peak of 6,200 rpm.

Even with its high speed potential, the builders of the car, City Lincoln-Mercury, Pasadena, Calif., say it can be driven in city traffic.



The British made Allard, shown above, is strictly a competition model. It uses a modified Ford truck front axle.



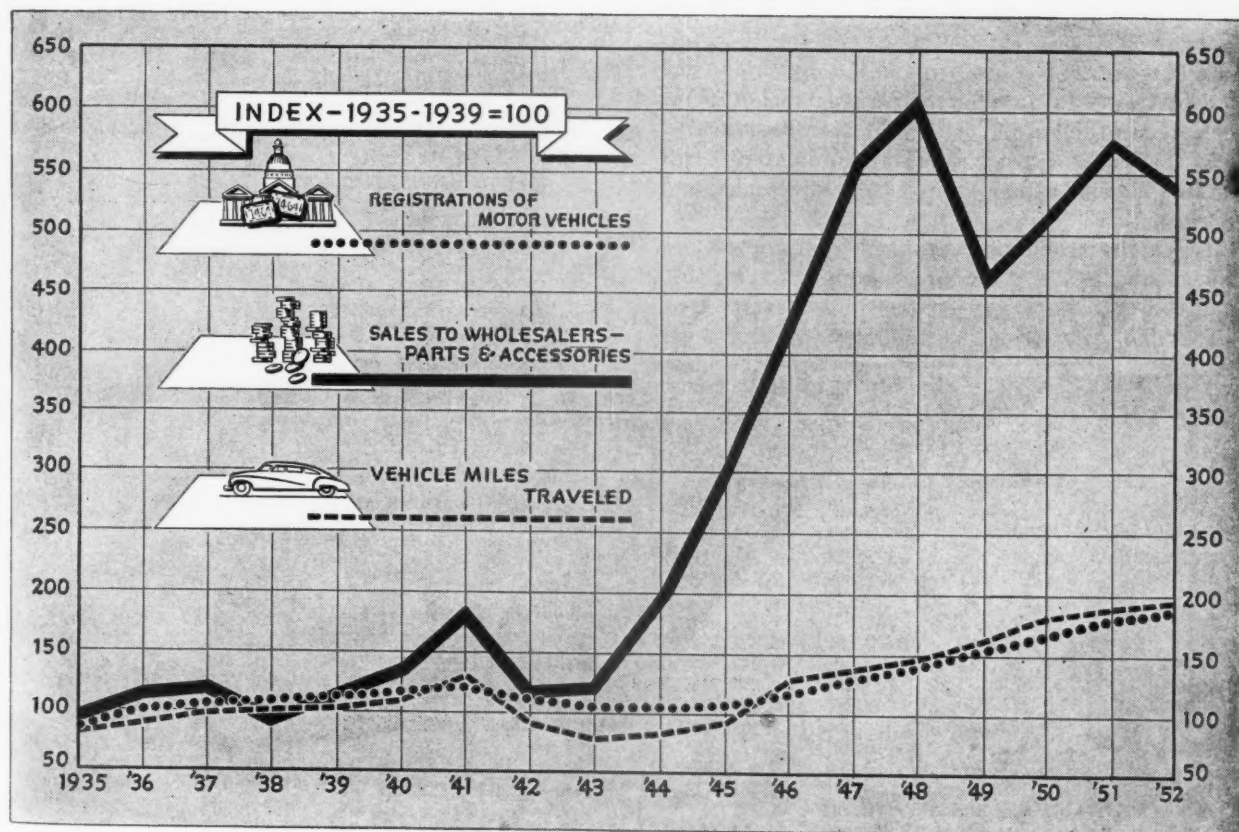
Installation of the Lincoln engine in the Allard (left) with four carburetors. Rear and transmission are Ford parts.

Business Guide

for 1953



By Frank P. Tighe and M. Ainsworth



THE dollar volume of factory sales of parts and accessories declined somewhat in 1952.

Although the steel strike contributed somewhat to this falling off, experts also point out that the increasing number of new cars on the road, not yet having entered their "service

years" is also accountable. It is predicted that vehicle miles traveled will continue at a high rate during 1953 and it is expected that factory sales of parts and accessories will closely approximate those of 1952. Registrations of motor vehicles indicate a tendency toward leveling off.

Vehicle Production Down But Registrations

AT the outset, 1953 will see more motor vehicles on the road than at any time in the history of automotive transportation. As shown on the opposite page, it is estimated that at the end of 1952 there will have been 52.3 million motor vehicles registered throughout the United States. While registrations will have reached an all-time high, the actual increase over 1951 is but 2.64 per cent. This would indicate a leveling off of registrations after the unusually sharp climb in the post-war years. A trend that might well follow for 1953.

The extensive use of motor vehicles, the essentiality of automotive transportation is reflected in the gain in total vehicle miles traveled in the U. S. Strong gains are indicated in all three classifications, passenger cars, buses and trucks.

Vehicle production dropped roughly 19 per cent over 1951. Factors which brought this into being were the controlled materials plan and the disruption of industry by the steel strike.

Motor Vehicle Production Record

(Factory Sales from U. S. Plants)

	Passenger Cars	Trucks and Buses	Total Motor Vehicles
1930.....	2,784,745	571,241	3,355,986
1931.....	1,973,090	416,648	2,389,738
1932.....	1,135,491	235,187	1,370,678
1933.....	1,573,512	346,545	1,920,057
1934.....	2,177,919	575,192	2,753,111
1935.....	3,252,244	694,690	3,946,934
1936.....	3,669,528	784,587	4,454,115
1937.....	3,915,889	893,085	4,808,974
1938.....	2,000,985	488,100	2,489,085
1939.....	2,866,796	710,496	3,577,292
1940.....	3,717,385	754,901	4,472,286
1941.....	3,779,682	1,060,820	4,840,502
1942.....	222,862	818,662	1,041,524
1943.....	139	699,689	699,828
1944.....	610	737,524	738,134
1945.....	69,532	655,683	725,215
1946.....	2,148,699	940,866	3,089,565
1947.....	3,558,178	1,239,443	4,797,621
1948.....	3,909,270	1,376,274	5,285,544
1949.....	5,119,466	1,134,185	6,253,651
1950.....	6,665,863	1,337,193	8,003,056
1951.....	5,336,935	1,428,328	6,765,263
1952 (Est.)...	4,300,000	1,200,000	5,500,000

Total Vehicle Miles Traveled in U. S.

(All figures shown in millions)

	Passenger Cars	Buses	Trucks	Total Miles
1936.....	208,654	2,367	41,107	252,128
1937.....	223,467	2,492	44,151	270,110
1938.....	224,174	2,508	44,495	271,177
1939.....	235,629	2,554	47,219	285,402
1940.....	249,559	2,657	49,927	302,143
1941.....	275,685	2,820	54,891	333,396
1942.....	218,239	3,130	45,727	267,096
1943.....	161,788	3,365	41,594	206,747
1944.....	167,073	3,799	41,708	211,580
1945.....	199,599	3,758	45,987	249,344
1946.....	280,457	4,052	56,146	340,655
1947.....	300,282	4,251	66,089	370,622
1948.....	319,459	4,283	73,847	397,589
1949.....	342,374	4,252	77,463	424,089
1950.....	364,464	4,081	89,877	458,422
1951.....	382,994	4,311	95,064	482,369
1952†....	402,091	4,579	99,817	506,487

* Public Roads Administration and Automobile Manufacturers Association.

† Estimated by Motor Age.

20 Years of Motor Vehicle Registrations

	Passenger Cars	Trucks and Buses	Total Motor Vehicles
1933.....	20,557,493	3,292,439	23,849,932
1934.....	21,535,199	3,346,268	24,881,467
1935.....	22,513,715	3,644,997	26,158,712
1936.....	24,044,432	4,047,277	28,091,709
1937.....	25,356,786	4,292,484	29,649,270
1938.....	25,264,589	4,283,395	29,547,984
1939.....	26,147,798	4,496,770	30,644,568
1940.....	27,240,475	4,683,376	31,923,851
1941.....	29,240,417	4,911,990	34,152,407
1942.....	27,683,529	4,741,298	32,424,827
1943.....	25,841,215	4,657,882	30,499,097
1944.....	25,298,639	4,611,966	29,910,605
1945.....	25,398,824	5,025,233	30,424,057
1946.....	27,834,543	5,858,813	33,693,356
1947.....	30,511,368	6,785,816	37,297,184
1948.....	33,009,515	7,468,712	40,478,227
1949.....	35,962,469	7,914,263	43,876,732
1950.....	39,952,969	8,318,721	48,271,690
1951.....	42,136,297	8,855,319	50,991,616
1952 (Est.)...	43,232,384	9,091,946	52,324,330

Gain Slightly

Business Guide for

1953

Estimate of Motor Vehicle Registrations

As of the End of the 1952 Registration Year

STATE	Passenger Cars*		Trucks		Buses		Total Motor Vehicles		Per Cent Increase
	1952	1951	1952	1951	1952	1951	1952	1951	
Alabama.....	542,850	507,233	167,000	162,058	1,700	1,807	711,550	671,098	6.03
Arizona.....	239,190	221,450	69,760	64,584	750	716	309,700	286,750	8.00
Arkansas.....	328,000	327,916	154,000	153,149	3,700	3,637	485,700	484,702	0.21
California.....	4,145,000	4,028,755	700,000	643,926	7,250	7,206	4,852,250	4,679,889	3.68
Colorado.....	467,918	459,326	129,262	128,325	†	†	597,180	587,651	1.62
Connecticut.....	665,519	629,637	93,615	89,172	3,228	2,772	762,362	720,581	5.80
Delaware.....	91,500	87,889	22,000	20,993	†	†	113,500	108,882	4.34
District of Columbia.....	165,200	161,065	18,500	18,602	2,200	2,008	185,900	181,675	2.32
Florida.....	972,921	905,502	931,863	187,219	6,500	6,418	1,173,284	1,099,139	6.74
Georgia.....	805,000	751,349	216,000	203,825	6,000	3,534	1,027,000	958,708	7.12
Idaho.....	202,000	200,490	75,000	75,484	†	162	277,000	276,136	0.31
Illinois.....	2,450,000	2,402,873	360,000	378,868	3,000	†	2,813,000	2,781,741	1.12
Indiana.....	1,265,000	1,236,471	235,500	247,965	9,900	8,825	1,510,400	1,493,261	1.15
Iowa.....	890,000	893,759	193,000	190,107	†	†	1,083,000	1,083,866	-0.08
Kansas.....	691,172	677,939	226,493	215,097	†	†	917,665	893,036	2.78
Kentucky.....	680,000	635,024	180,500	171,445	3,000	2,961	863,500	809,430	6.68
Louisiana.....	561,128	569,733	164,655	161,426	3,900	3,856	749,683	735,015	2.00
Maine.....	213,075	206,134	64,200	63,353	375	467	277,650	271,954	2.09
Maryland.....	659,912	619,409	111,137	106,873	4,898	4,411	775,947	730,693	6.19
Massachusetts.....	1,190,000	1,162,034	169,000	169,543	7,920	6,193	1,366,920	1,337,770	2.18
Michigan.....	2,223,000	2,214,284	312,000	311,948	†	†	2,535,000	2,526,232	0.35
Minnesota.....	996,900	1,000,724	209,000	202,536	3,685	3,436	1,209,585	1,206,696	0.24
Mississippi.....	341,081	345,960	165,189	154,323	2,201	2,496	508,471	502,779	1.13
Missouri.....	1,040,000	1,035,451	272,000	270,150	4,500	4,550	1,316,500	1,310,151	0.48
Montana.....	190,000	186,957	87,000	84,252	†	†	277,000	271,209	2.13
Nebraska.....	500,000	467,951	140,000	138,431	875	888	640,875	607,270	5.53
Nevada.....	67,800	64,857	21,000	18,753	†	†	88,800	83,610	6.21
New Hampshire.....	143,600	142,198	34,000	33,511	†	†	177,600	175,709	1.08
New Jersey.....	1,498,905	1,441,013	213,900	213,853	9,710	10,050	1,722,515	1,664,916	3.46
New Mexico.....	191,899	173,433	69,847	59,349	1,210	899	262,956	233,681	12.53
New York.....	3,374,000	3,317,186	465,000	458,661	17,000	11,386	3,856,000	3,787,233	1.81
North Carolina.....	921,000	889,373	218,500	209,465	8,300	8,211	1,147,800	1,107,049	3.68
North Dakota.....	195,000	194,428	93,000	86,480	195	186	288,195	281,094	2.53
Ohio.....	2,610,000	2,555,025	360,000	352,441	5,100	5,010	2,975,100	2,912,476	2.15
Oklahoma.....	657,100	641,258	220,000	211,365	1,250	1,681	878,350	854,304	2.81
Oregon.....	624,065	616,417	85,634	83,841	1,500	1,944	711,199	702,202	1.28
Pennsylvania.....	2,744,294	2,700,386	510,000	502,255	12,900	12,700	3,267,194	3,215,341	1.61
Rhode Island.....	234,330	227,753	32,615	32,056	590	763	267,535	260,572	2.67
South Carolina.....	527,000	481,357	124,000	116,963	4,900	4,778	655,900	603,118	8.75
South Dakota.....	219,220	219,354	77,722	75,090	291	319	297,233	294,763	0.84
Tennessee.....	705,000	702,426	184,000	182,753	2,400	2,385	891,400	887,564	0.43
Texas.....	2,500,000	2,453,150	672,000	659,999	5,391	5,212	3,177,391	3,118,361	1.89
Utah.....	216,000	210,940	49,978	48,807	625	616	266,603	260,363	2.40
Vermont.....	110,400	106,382	15,400	14,941	157	157	125,957	121,480	3.68
Virginia.....	850,805	804,916	190,450	196,383	2,225	2,632	1,043,480	1,003,931	3.94
Washington.....	792,200	782,742	170,000	163,772	1,800	1,754	964,000	948,268	1.66
West Virginia.....	376,400	370,817	115,000	110,160	1,400	1,386	492,800	482,363	2.16
Wisconsin.....	1,028,000	1,000,066	240,000	228,277	2,700	2,737	1,270,700	1,231,080	3.22
Wyoming.....	109,000	104,505	46,000	41,319	†	†	155,000	145,824	6.29
Total.....	43,232,384	42,138,297	8,936,720	8,714,170	155,226	141,149	52,324,330	50,991,616	2.64

†—Included with trucks.

‡—Included with passenger cars.

*—Includes taxicabs.

§—Includes approximately 130,000 light trucks registered as passenger cars.

1952 Parts and Accessories Sales Indica

Automotive Wholesalers, Dealers and Repair Shops by States* With Number of Motor Vehicles per Outlet

STATE	Total Motor Vehicle Regis- trations	WHOLESALEERS		DEALERS		INDEPENDENT REPAIR SHOPS		ALL RETAIL OUTLETS	
		Number of Whole- salers	Motor Vehicles per Whole- saler	Car and Truck Dealers	Motor Vehicles per Car and Truck Dealer	Inde- pendent Repair Shops	Motor Vehicles per Repair Shop	All Retail Outlets	Motor Vehicles per Retail Outlet
Alabama.....	711,550	146	4,874	604	1,178	559	1,273	1,163	612
Arizona.....	309,700	79	3,920	242	1,280	617	502	859	361
Arkansas.....	485,700	137	3,545	628	773	597	814	1,225	396
California.....	4,852,250	839	5,783	2,455	1,976	7,457	651	9,912	490
Colorado.....	597,180	100	5,972	539	1,108	843	708	1,382	432
Connecticut.....	762,362	115	6,629	598	1,275	1,023	745	1,621	470
Delaware.....	113,500	20	5,675	112	1,013	270	420	382	297
Dist. of Columbia.....	185,900	25	7,436	92	2,021	249	747	341	545
Florida.....	1,173,284	203	5,780	723	1,623	1,422	825	2,145	547
Georgia.....	1,027,000	188	6,113	889	1,155	756	1,358	1,645	624
Idaho.....	277,000	74	3,743	404	686	529	524	933	297
Illinois.....	2,813,000	493	5,706	2,760	1,019	3,999	703	6,759	416
Indiana.....	1,510,400	242	6,241	1,485	1,017	1,924	785	3,409	443
Iowa.....	1,083,000	226	4,792	1,550	699	1,517	714	3,067	353
Kansas.....	917,665	165	5,562	1,193	769	1,037	885	2,230	412
Kentucky.....	863,500	151	5,719	863	1,001	674	1,281	1,537	562
Louisiana.....	749,683	123	6,095	591	1,268	507	1,479	1,098	683
Maine.....	277,650	52	5,339	396	701	568	489	964	288
Maryland.....	775,947	102	7,607	520	1,492	1,092	711	1,612	481
Massachusetts.....	1,366,920	208	6,572	1,226	1,115	1,683	812	2,909	470
Michigan.....	2,535,000	328	7,729	1,920	1,320	3,395	747	5,315	477
Minnesota.....	1,209,585	165	7,331	1,683	719	1,869	647	3,552	341
Mississippi.....	508,471	104	4,889	688	739	285	1,784	973	523
Missouri.....	1,316,500	264	4,987	1,250	1,053	1,416	930	2,666	494
Montana.....	277,000	66	4,197	475	583	401	691	876	316
Nebraska.....	640,875	125	5,127	825	777	932	688	1,757	365
Nevada.....	88,800	20	4,440	104	854	153	580	257	346
New Hampshire.....	177,600	25	7,104	251	708	303	586	554	321
New Jersey.....	1,722,515	226	7,622	1,207	1,427	2,939	586	4,146	415
New Mexico.....	262,956	68	3,867	290	907	482	546	772	341
New York.....	3,856,000	544	7,088	2,976	1,296	7,190	536	10,166	379
North Carolina.....	1,147,800	223	5,147	1,079	1,064	931	1,233	2,010	571
North Dakota.....	288,195	49	5,882	558	516	396	728	954	302
Ohio.....	2,975,100	458	6,496	2,412	1,233	3,421	870	5,833	510
Oklahoma.....	878,350	213	4,124	980	896	1,074	818	2,054	428
Oregon.....	711,199	164	4,337	581	1,224	1,309	543	1,890	376
Pennsylvania.....	3,267,194	567	5,762	3,262	1,002	6,256	522	9,518	343
Rhode Island.....	267,535	39	6,860	204	1,311	469	570	673	398
South Carolina.....	655,900	93	7,053	505	1,299	382	1,717	887	739
South Dakota.....	297,233	44	6,755	552	538	416	715	968	307
Tennessee.....	891,400	156	5,714	804	1,109	827	1,078	1,631	547
Texas.....	3,177,391	590	5,385	2,951	1,077	3,704	858	6,655	477
Utah.....	266,603	80	3,333	279	956	565	472	844	316
Vermont.....	125,957	22	5,725	212	594	237	531	449	281
Virginia.....	1,043,480	138	7,561	979	1,066	1,046	998	2,025	515
Washington.....	964,000	216	4,463	808	1,193	1,915	503	2,723	354
West Virginia.....	492,800	105	4,693	644	765	873	564	1,517	325
Wisconsin.....	1,270,700	193	6,584	1,721	738	1,491	852	3,212	396
Wyoming.....	155,000	35	4,429	253	613	191	812	444	349
Total.....	52,324,330	8,988	5,822	48,323	1,083	72,191	725	120,514	434

* Trade List Department—Chilton Company.

Billion Total Service Business



Factory Sales of Repair Parts and Accessories 1933-1952

	Wholesale Value
1933.....	\$234,461,000
1934.....	304,642,000
1935.....	378,323,000
1936.....	448,527,000
1937.....	464,619,000
1938.....	348,068,000
1939.....	454,673,000
1940.....	553,004,000
1941.....	718,212,000
1942.....	471,957,000
1943.....	527,710,000
1944.....	816,724,000
1945.....	1,284,926,000
1946.....	1,752,918,000
1947.....	2,353,523,000
1948.....	2,552,872,000
1949.....	1,895,050,000
1950.....	2,139,734,000
1951*.....	2,403,150,600
1952.....	2,300,000,000

* Partly estimated.

The above data are based on Federal Excise tax collections. The excise tax does not apply on parts and accessories exported, so these values apply for domestic sales only. Prior to July 1, 1944, sales to U. S. government were not subject to the tax, but have been since that date.

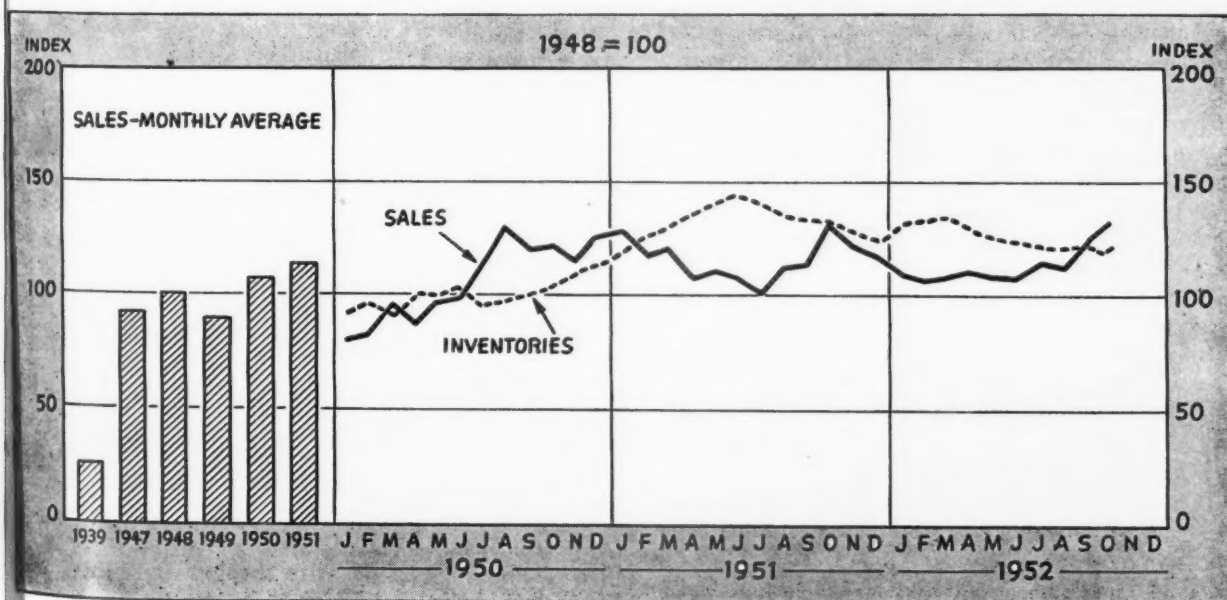
THE broad view of the tremendous size of the automotive service market can be gained by examining and projecting the wholesale value of parts and accessories based on factory sales figures. In 1952, the estimated sales of repair parts and accessories at the wholesale level was \$2,300,000,000. A million less than the preceding year.

However, by doubling the wholesale value to reach an approximate retail value the figure leaps to \$4.6 billion. Experts agree that in broad terms parts sales represent fifty per cent of service sales and labor represents the remaining fifty per cent. Therefore, by adding an approximate \$4.6 billion labor sales to the same amount for parts and accessories sales, a booming total of \$9.2 billion for the total automotive service business in the U. S. for 1952.

On the table opposite are shown wholesale and retail outlets and number of motor vehicles per outlet. The number of wholesalers increased by 272 in 1952; the number of car and truck dealers grew 2303 last year; while the number of independent repair shops was up 2780 over 1951.

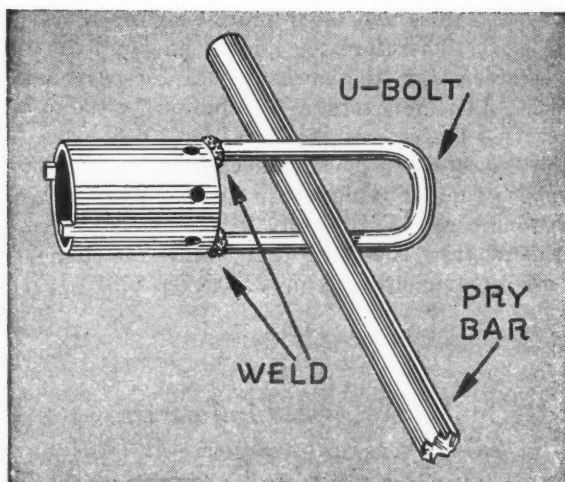
Trends in Jobbers (All Industries) Sales and Inventories

(Based on Reports Submitted to the Bureau of The Census)





Truck Service Hints

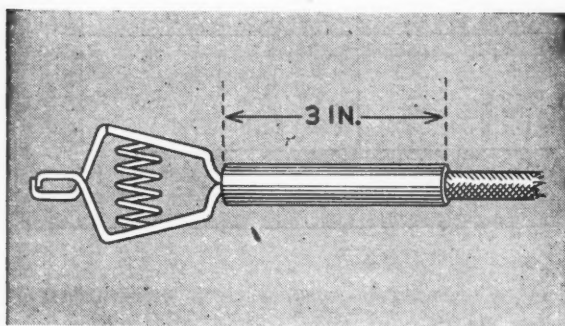
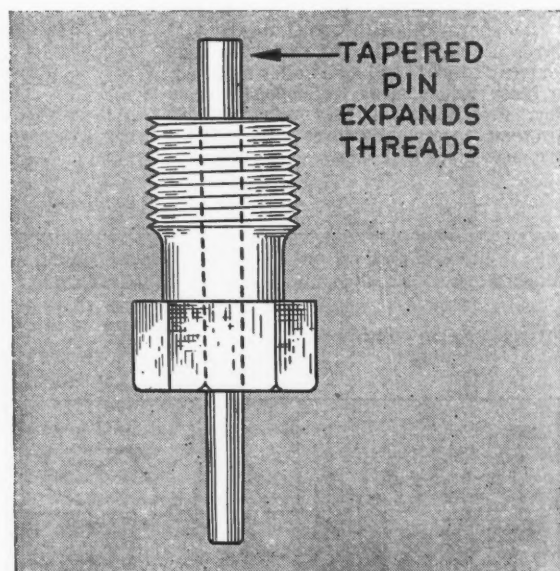


◀ U-Bolt Makes Wheel Nut Wrench

We always pack truck wheel bearings with the tires on the wheel. By taking a regular wheel wrench and welding a U-bolt to it, it saves pulling off the outside wheel. The U-bolt sticks out beyond the outer tire of the dual wheel 5 or 6 inches, thus providing us with a means of applying as much leverage as needed.

Tapered Pin Expands Worn Threads ▶

Sometimes a bolt will slip while the threads are being tightened and, because of a thin outside wall, it is not possible to tap out for the next larger size. To get around this, the bolt can be expanded to make a good fit. Drill out the center of the bolt and drive a pin through the hole. For instance, on a $\frac{5}{8}$ inch bolt, drill a $\frac{1}{4}$ inch hole completely through the center and, starting from the threaded end, drive a No. 5 tapered pin in. When the bolt is sufficiently expanded, saw off both ends of the pin.



◀ Hose Saves Battery Clamp Wires

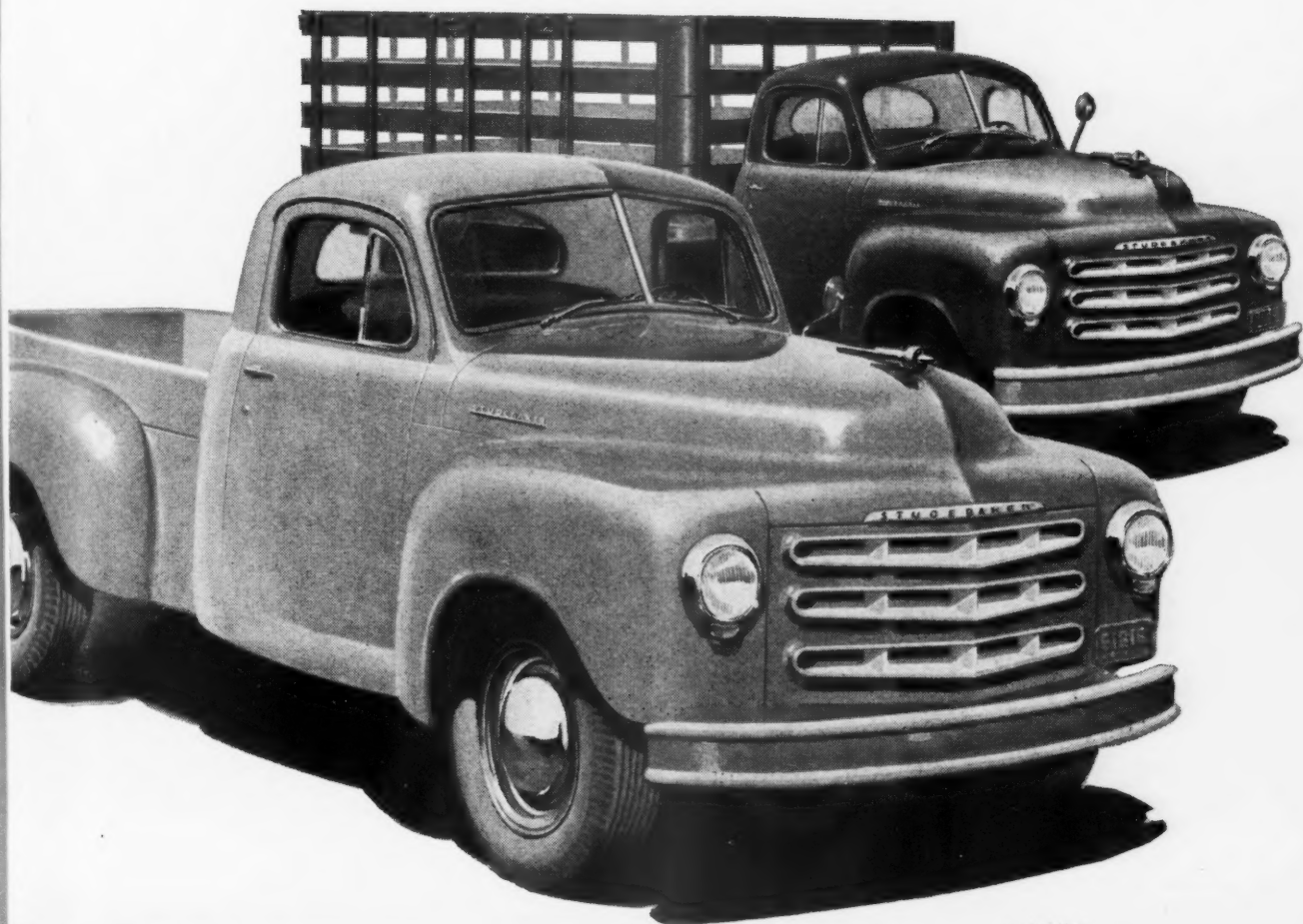
When trouble is encountered with wire leads breaking off right where they connect to the alligator clip, take a piece of wiper hose about three inches long and run the wire through it. Make the connection on the clip and then force the end of the hose over the end of the clip where the wire attaches to it. It makes good, tough insulation and lasts for years.

STUDEBAKER

The name with a century of fame in commercial transportation

Sturdy Studebakers

**have been doing America's hauling
for more than 100 years**





Shop Kinks

If you've come upon an original idea for making a job easier, a special tool, short cut on a job or any trick of value to other readers, write it down and if necessary, make a rough sketch. Just make it clear. Send it to Motor Age. If we can use your Kink it may bring seven-fifty, possibly 25 dollars. All submissions become the property of Chilton Company. Because of the numbers received, no entries can be returned.

For The Best Kink Published Each Month . . . \$25

For All Kinks Published Each Month . . . \$7.50

Small Hole In Guide

Prolongs Exhaust Valve Life

I have found a way to prolong the exhaust valve life on trucks and tractors. By drilling a very small hole in the valve guide flush with the head from the center of the head. This seems to provide enough oil on the valve stem to keep it free from sticking and has doubled the life on the valve jobs. This hasn't added to the oil consumption either. *George L. Seidl, Luxemburg Implement Co., Luxemburg, Wisconsin.*

Time Saver In Replacing Powerglide Mountings

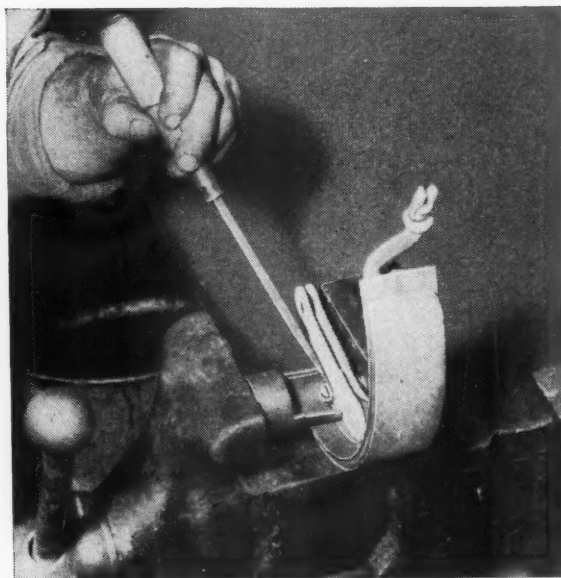
I have found several Powerglide transmission mounts that have been broken and that make considerable cracking noises.

In changing them I drill a $\frac{1}{4}$ inch hole in the center of each rivet and then drill them with a $\frac{1}{2}$ inch bit. This leaves a thin shell which can be punched out. This is much easier and faster than chiseling them off. *James Jack, Fox & Finley Chevrolet Co., 710 Nuckols Street, Red Oak, Iowa.*

Device for Making Soldered Connections on the Car

Here is a handy soldering tool that can be made as follows: (a)
(Continued on page 94)

Best Kink of the Month



Handy Tool for Chevrolet Brake Work

We made a tool for disassembling the brake shoe links on Chevrolet Huck brakes. Take a piece of $\frac{3}{4}$ in. pipe and cut as shown in the illustration. Place the shoe and tool in a vice and tighten until the pin can be pried off with a screw driver. *Grover Brinkman, Okawville, Ill.*



**...sure cure
for oil-thirsty
engines...**

Every working hour, U. S. mechanics replace worn piston rings in 4500 engines, to stop oil pumping and restore horsepower. An ever-increasing number of those engines will give outstanding performance because 2-in-1 Chrome Piston Rings were installed!

**...positive protection
against comebacks!**

With Perfect Circle's 2-in-1 Chrome Set...having thick solid chrome plating on the top compression and oil rings, you can promise your customers double life for cylinders, pistons and rings, with sustained power and positive oil control!

Only 2-in-1 provides a choice of expander springs—NORMAL and HiPRESSURE—with every oil ring, to meet every condition of cylinder wear. No wonder 2-in-1 has set a new standard of piston ring performance!



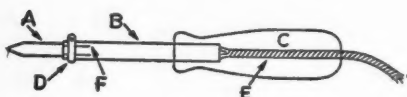
Perfect Circle *2 in 1 chrome piston ring set*

The Standard of Comparison

Perfect Circle Corporation, Hagerstown, Indiana

Shop Kinks Continued from Page 92

obtain the center from a flashlight battery, (b) $\frac{3}{8}$ inch copper tubing and (c) a wooden file handle. (d) Bind carbon in tubing with wire. (e) Make lead from heavy gage insulated wire. (f) Cut splines in tubing and push in carbon.



This tool can be made in a few minutes and save many burns on the hands. The total cost of the tool is about fifty cents. Using the car's battery for juice, this soldering iron is very handy for making soldered connections on the car as well as off. Connect a wire clamp at the end of the heavy gage wire to any hot terminal on the car, and the tip will get any wire hot enough to make a soldered connection. If the material is not grounded, make a ground with a jumper wire. The tubing can be cut to any length desired, but the shorter, the better for use in tight spots. *Dick Stefens, R. M. Batey Chev. Co., Clarksburg, Calif.*

Booster Battery Helps Thaw Frozen Brake Fittings

I have found frozen brake line fittings on a number of cars, especially Chrysler products. Using the booster battery that we have around the shop, I put two battery cables on it. One end of the cable I place on the frozen fitting and the other I place to the ground as close to the fitting as possible. After holding the cables in place a few seconds, the fitting becomes red hot and can be removed very easily. *Louis DiGuiseppe, 61 Irvington St., New Haven, Conn.*

A Short Cut In Replacing Chevrolet Timing Gears

I have found a short cut when replacing the timing gear in Chevrolet cars and trucks. It is necessary on Chevrolets to remove the camshaft in order to press on a new gear. I have saved at least an hour on the job by leaving the side cover, spark plugs, coil and push rods on the engine and pushing the valve lifters up from the

bottom, as it is necessary to remove the oil pan to get the front cover off anyway. The lifters will stay up out of the way very easily because of the residue that forms on them, thus holding them up. Then when putting the rocker arms back on your push rods, they are all in place and you can start your engine without changing the adjustment on the valves. Let the motor warm up and then adjust the valves to the right clearance. *Clayton Suks, 612 Granite Street, Waupaca, Wisconsin.*

Simplifying Hydraulic Line Replacement on Mercurys

On Mercury convertibles with hydraulic controls on the windows, it is sometimes necessary to remove the flexible oil line from the left front door to break the fittings loose from the junction block. After the line is completely out of the rubber protector hose, it is hard to get the new one back in (especially if the old protector is collapsed partially) because of the fitting being larger on the end. So what we do is screw the new line into one end of the old hose and cut off the fitting from the other end. This makes a smaller end to push through. Lubricate it with the brake fluid and pull the new one into place. *Mr. K. E. Wood, Woody's Service Speedway "79," 56955 Gratiot Avenue, New Haven, Michigan.*

Brake Tool Used On Ford 6 Valve Job

I had a valve job on a Ford Six 1946, (without adjustable tappets). This was the first job I ever had on this type engine. In stock with our tools we had a puller for the intake valve, but no tool to replace the locks in the guides. Having only 6 or 8 inches clearance between the block and fender pan, I couldn't use the long tool used on V-8 models. I was ready to give up when I spotted a brake tool for adjusting Chevrolet brakes. Taking the straight end of the tool which has a slight bend on the very end, turning the points down, I reached through the ports on the side of the block and put the points on both guide halves and pulled up-

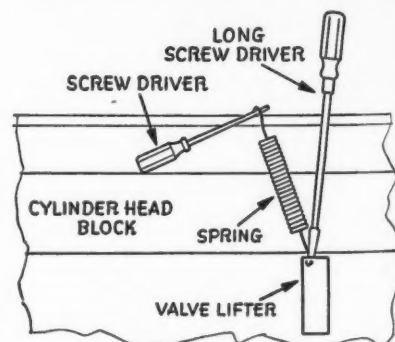
ward on the tool. I could lower the guide more than enough to insert the lock. I did the whole job of replacing the valves in ten minutes. *Bill Owen, Perry Auto Parts, P. O. Box 589, Bradenton, Florida*

Handles Installed on Creeper Improve Ease of Handling

Handles attached to the side and head of a creeper makes it much easier to carry and lessens the chance of getting greasy hands on the creeper, which quite frequently happens. The handles may be bought at any dime store or made from a piece of heavy leather belting. If metal handles are used, they should be attached to the creeper with screws, as near to the center as possible. If a leather strap is used, it should be approximately ten inches long and one inch wide and attached to the creeper with wood or metal screws. *L. W. Lefler, Lefler's Garage, 2929 South First St., Abilene, Texas.*

Tool for Removing Hydraulic Lifters

Here is an easy way to get hydraulic valve lifters out of Buicks and Chevrolets. Take a clutch pull back spring and cut the large hook off of one end and bend a small 90 degree hook so as to hook the valve lifter by the little hole in the top. Then with a small screw driver hook the other end of the spring and stretch the spring to put the tension on the lifter. Put a long



screw driver down the push rod hole in the cylinder head so that it is resting on the lifter with the spring in it. Keep hitting the long screwdriver down until the lifter pops out. This saves a lot of time on this operation. *Ken Gerling, 14840 Otsego St., Sherman Oaks, Calif.*



Your **TP** jobber

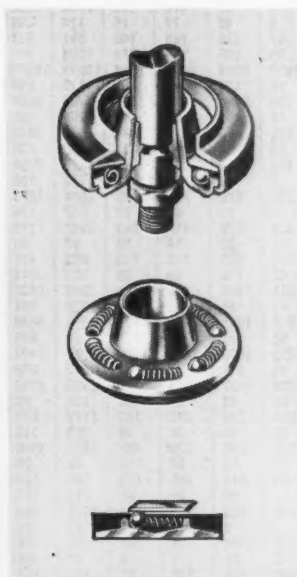
is **VALVE ROTATION**

HEADQUARTERS

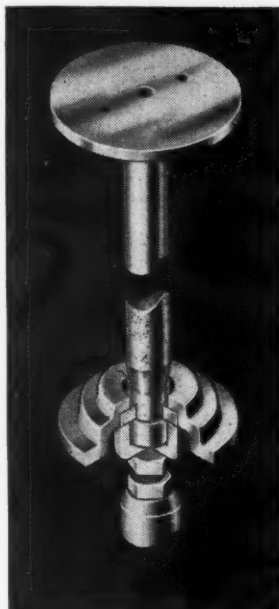
VALVE ROTATION was pioneered by Thompson Products and has been called "the hottest development in the original equipment field." Over 50 automotive builders have already turned to valve rotation as the new way to lengthen valve life. 41 of these manufacturers have adopted the Thompson ROTOCAP—the only valve rotator with *positive* turning action—approximately 6 degrees every time the valve opens and closes—the rotator that increases valve life 2 to 5 times. *With the ROTOCAP you set the valve clearance just as you've always done—that's ALL.*

Earlier, in 1938, TP pioneered and introduced the release-type ROTOVALVE which is next to the ROTOCAP in original equipment adoption. Thompson also manufactures friction-type (Ford) valve rotators.

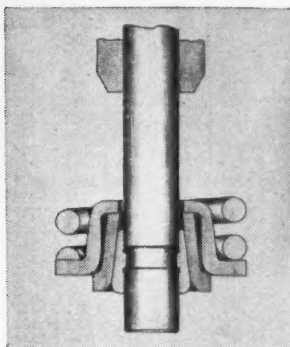
So you can get ALL THREE types of valve rotators from your Thompson Jobber. Go to him—he is "Valve Rotation Headquarters" in the automotive maintenance field.



ROTOCAP, positive rotating type.



ROTOVALVE, release type.



Friction type (Ford)

HAVE
YOU
SEEN



TP's new color sound movie?
If not, ask your Thompson Jobber.

See your **Thompson**
Products Jobber

SERVICE DIVISION
2209 Ashland Rd., Cleveland 3, Ohio

1952 New Passenger Car Registrations by Makes by States*

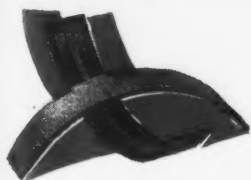
STATE AND MONTH	Buick	Cadillac	Chevrolet	Chrysler	Crosley	De Soto	Dodge	Ford	Henry J	Hudson	Kaiser	Lincoln	Mercury	Nash	Oldsmobile	Packard	Plymouth	Pontiac	Studebaker	Willis	Others	Total	
Alabama.....	October	468	106	1712	74	8	82	309	1417	52	105	71	64	333	217	341	92	572	439	242	126	18	9,847
Arizona.....	10 Mos.	2809	616	9543	882	23	582	2118	7559	478	668	330	329	1822	1088	1913	623	4377	2553	1514	645	80	49,560
Arkansas.....	October	112	42	357	34		20	62	277	29	23	19	21	83	50	71	27	87	106	58	16	15	1,501
California.....	10 Mos.	1285	310	2829	438	27	307	726	2446	287	334	151	124	911	421	748	282	1272	942	822	184	185	15,531
Colorado.....	October	209	37	719	19		51	101	591	19	15	12	11	60	54	131	19	260	188	116	33	1	2,668
Connecticut.....	10 Mos.	1859	374	5481	450	20	510	1412	4569	268	281	203	119	970	649	1081	255	3027	1633	1005	276	28	24,270
Delaware.....	October	2791	1190	7960	722		515	1489	5971	85	673	493	393	2049	1258	2097	369	2186	2033	1234	358	1174	35,390
Dist. of Col.....	10 Mos.	19244	8597	51394	9090	98	6806	14522	42439	1164	6780	3472	2509	15647	11474	15038	4406	27501	17174	12690	3018	9318	285,381
Florida.....	October	303	112	756	73	1	62	168	656	5	68	22	44	178	105	208	67	284	234	99	36	23	1,584
Georgia.....	10 Mos.	2536	667	5376	959	44	591	1530	4979	93	882	180	300	1387	981	1822	481	2938	1441	1011	381	150	28,880
Idaho.....	October	481	187	1250	119	1	129	321	1155	37	154	77	57	228	209	368	107	453	443	202	83	74	8,135
Illinois.....	10 Mos.	3606	1318	9043	1590	38	1180	3683	7949	603	1321	716	453	2179	1888	2992	1091	4968	3229	2021	704	798	51,386
Indiana.....	October	80	26	334	6		10	31	279	10	12	14	15	32	39	67	12	70	52	55	1	8	1,153
Iowa.....	10 Mos.	777	223	2468	199	16	144	523	1893	86	175	122	73	379	287	594	121	897	550	554	49	59	10,109
Kansas.....	October	100	48	366	32		25	87	333	11	46	6	13	33	25	132	25	154	124	24	8	18	1,608
Kentucky.....	10 Mos.	980	472	3643	506	4	285	1157	2574	144	351	82	119	461	366	965	345	3106	1118	418	126	149	17,373
Louisiana.....	October	529	205	1637	182	2	109	278	1638	54	111	81	69	339	208	417	118	564	388	163	118	140	7,292
Maine.....	10 Mos.	5003	1685	12159	1881	250	1085	4046	10575	973	988	500	681	3127	2272	3245	1331	6551	3589	2273	1066	1283	64,843
Maryland.....	October	498	116	1776	80	1	77	244	1078	25	59	30	44	234	103	319	69	486	474	204	55	11	8,292
Massachusetts.....	10 Mos.	4893	1093	14131	1299	40	837	3433	11482	624	750	419	399	2738	1262	3176	802	6096	4441	2396	612	197	61,120
Michigan.....	October	165	53	735	35	1	38	88	269	8	45	19	15	114	69	112	20	133	109	88	43	11	1,820
Minnesota.....	10 Mos.	1329	311	2893	421	2	327	820	2268	67	525	193	106	891	631	838	272	1376	894	684	346	78	19,494
Mississippi.....	October	1974	725	5526	394	7	437	956	5366	56	505	167	218	1209	963	1363	300	2389	1698	693	139	48	25,163
Missouri.....	10 Mos.	19519	6051	45601	6858	170	5616	15566	38800	1040	6684	2086	1752	10803	10274	12454	3735	28761	14786	8404	1206	987	241,117
Montana.....	October	642	171	1866	87	2	159	319	1583	26	170	96	65	329	389	474	85	668	587	446	87	23	9,214
Nebraska.....	10 Mos.	7123	1816	20676	2564	73	2254	5378	16132	735	2196	1117	677	3895	3894	4889	1438	10429	6442	6227	856	162	98,473
Nevada.....	October	501	118	1827	88		108	298	1468	15	60	38	42	284	197	373	56	688	822	249	40	5	6,825
New Hampshire.....	10 Mos.	4213	1020	13830	1600	12	1120	3455	11267	231	680	490	324	2568	1971	2975	740	6556	3770	2349	404	56	59,613
New Jersey.....	October	410	108	1175	65	1	74	214	977	23	109	29	36	240	234	286	49	413	388	154	40	8	4,993
New Mexico.....	10 Mos.	3927	845	10664	1367	35	912	3028	9197	433	1415	632	319	2333	2236	2617	835	5193	3250	1832	371	61	51,499
New York.....	October	360	78	1328	34		54	204	987	7	74	38	17	190	182	244	49	323	328	169	46	5	4,717
North Carolina.....	10 Mos.	2928	631	9983	958	26	620	2471	7777	261	679	264	182	1584	1623	2057	589	4135	2694	1684	468	83	41,577
North Dakota.....	October	389	100	1528	66	3	100	206	1272	40	35	47	27	182	114	260	68	486	363	187	50	8	5,530
Ohio.....	10 Mos.	2774	661	10262	1013	47	900	2282	8242	392	373	417	249	1567	1216	2058	799	4699	3005	2080	414	98	43,528
Oklahoma.....	October	150	28	443	14		46	81	370	11	82	18	16	67	46	78	23	207	112	64	31	7	1,662
Oregon.....	10 Mos.	935	230	3076	380	18	347	889	2378	230	380	183	123	833	471	792	176	1613	985	521	256	73	14,608
Pennsylvania.....	October	592	94	1601	87	1	106	258	1479	47	175	88	65	162	244	379	90	583	478	192	57	46	8,767
Rhode Island.....	10 Mos.	3385	794	11756	1428	23	1124	3145	9739	891	1503	903	368	1995	1992	2580	959	6118	3296	1844	551	276	54,370
South Carolina.....	October	909	216	2257	153	4	248	509	2021	45	135	73	101	326	384	667	90	1071	770	390	84	154	10,587
South Dakota.....	10 Mos.	6896	1855	17110	2645	132	2778	8509	14821	919	1641	759	891	3561	3836	6168	1376	11714	6324	3526	876	107	95,002
Tennessee.....	October	2022	641	6251	253		436	1035	7783	98	388	280	195	1160	935	1758	289	1823	2176	639	145	147	28,334
Texas.....	10 Mos.	19255	6599	52272	4700	68	4049	11498	50433	1353	3843	2427	1770	9721	7409	13141	3095	20741	18104	8920	1276	382	238,480
Utah.....	October	731	154	2215	158	1	172	822	1724	25	147	64	91	682	258	437	126	763	676	290	40	12	9,288
Vermont.....	10 Mos.	5834	1263	17406	2218	12	1780	4451	13799	338	1127	748	372	3303	2185	4015	1277	8687	5124	3327	388	90	77,733
Virginia.....	October	282	50	999	62	1	45	145	712	18	48	24	24	136	77	163	36	308	257	100	40	3	3,577
Washington.....	10 Mos.	2196	445	6618	709	18	390	1289	5017	284	314	197	167	1177	674	1204	393	3025	1783	1216	273	26	27,415
West Virginia.....	October	5870	1418	16703	2024	54	1880	4471	15488	542	996	520	425	3471	3848	3763	1337	9907	4794	2687	500	118	82,614
Wisconsin.....	10 Mos.	1244	348	3298	451	4	327	854	2641	90	518	167	103	766	368	962	235	1541	925	719	323	19	15,889
Wyoming.....	October	2017	693	9676	1011	17	544	1612	7119	126	483	249	244	1513	964	1694	394	3643	2410	1349	270	32	35,162
Alabama.....	10 Mos.	30	18	93	12		6	36	96	8	3	7	3	26	25	13	29	39	68	12	27	93	1,153
Arizona.....	October	325	136	825	195	6	97	290	624	9	94	21	49	275	89	244	134	436	286	328	70	63	4,996
Arkansas.....	10 Mos.	78	20	278	15		16	63	245	5	34	7	9	37	46	58	16	85	76	32	18	17	1,153
California.....	October	778	176	2455	267	18	202	701	1845	155	331	195	96	392	518	624	182	1144	888	476	240	168	11,827
Colorado.....	10 Mos.	1156	422	3043	255	1	299	594	3337	74	317	177	152	514	491	820	294	1514	1201	436	178	97	14,862
Connecticut.....	October	9045	3207	22276	3972	98	2973	7766	20067	1144	3032	1470	932	5460	3836	6541	2649	11782	8801	4506	1488	1118	122,377
Delaware.....	10 Mos.	134	40	253	22	1	23	82	331	2	18	5	11	74	33	72	23	83	109	47	22	7	1,282
District of Columbia.....	October	1270	274	2448	394	41	271	689	1988	104	610	274	291	909	999	1626	247	1294	890	742	245	68	13,158
Florida.....	10 Mos.	3005	850	5595	449	4	650	1448	5080	104	610	274	291	909	999	1626	247	1294	890	742	245	68	13,158
Georgia.....	October	23436	8045	46338	9057	224	8873	21675	38388	2441	6410	3407	2279	10758	10080	18411	5676	27146	19082	9282	3518	3207	277,511
Idaho.....	10 Mos.	559	144	1811	82	2	126	196	1518	46	80	54	72	240	151	390	97	633	821	214	128	25	7,089
Illinois.....	October	5011	1181	14025	1378	53	1202	3222	11808	702	893	547	407	2636	1834	2172	995	6457	4390	2411	1035	268	63,117

Lasco

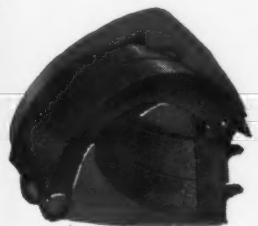
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THREE FRICTIONS

Victory Type	.036
Mountain Master Type	.030
Logger Type	.025



LASCO BONDING BLOX, either plain or with the bonding agent applied, are available in SUPER BLOX MATERIAL, in standard packages of 80 pieces.

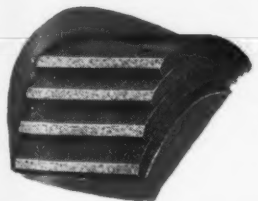


LASCO BRAKE SHOE EXCHANGES are also available in SUPER BLOX MATERIAL, either bonded or riveted. LASCO operates one of the largest and most modern brake bonding plants in the United States with a capacity of 30,000 shoes per day.



LASCO SUPER BLOX for trucks, trailers and busses are available in both drilled and undrilled sets in 3 different types:

1. VICTORY, a high friction (.036) material for maximum stopping capacity.
2. MOUNTAIN MASTER, the super universal fine car and truck brake material of medium high (.030) friction.
3. LOGGER, a medium friction (.025) material for the ultimate in mileage and economy.



THE LASCO organization is predominantly one of ENGINEERS. Its key men, department heads, research and development staff are MECHANICAL and CHEMICAL Engineers who take great pride in producing not the most, but the finest brake materials the United States has to offer.

Many mass production RUN-OF-THE-MILL brake materials are produced at low cost, for they contain in their manufacture little in addition to asbestos and phenolic resins, compared to the formula of LASCO SUPER BLOX materials which contain 16 ingredients, many of them very costly. LASCO SUPER BLOX are metal reinforced—that costs more, but prevents cracking under severe heat; also provides many times stronger bonding jobs and prevents bonding failure by FLAKE PEELING.

YES, LASCO Super Blox COST MORE to buy, COST MORE to produce, BUT COST the user LESS than 1/2 as much IN THE LONG RUN, and is the most beautifully performing brake material ever built. That is why LASCO production has never caught up to sales in 7 years, and more and more users are buying larger and larger quantities. Try LASCO—YOU HAVE A SURPRISE COMING!

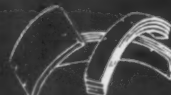
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Los Angeles San Francisco Sacramento
Portland Seattle Spokane Salt Lake City



LAHER INDUSTRIES



Current Passenger Car Price, Weight and Body Table

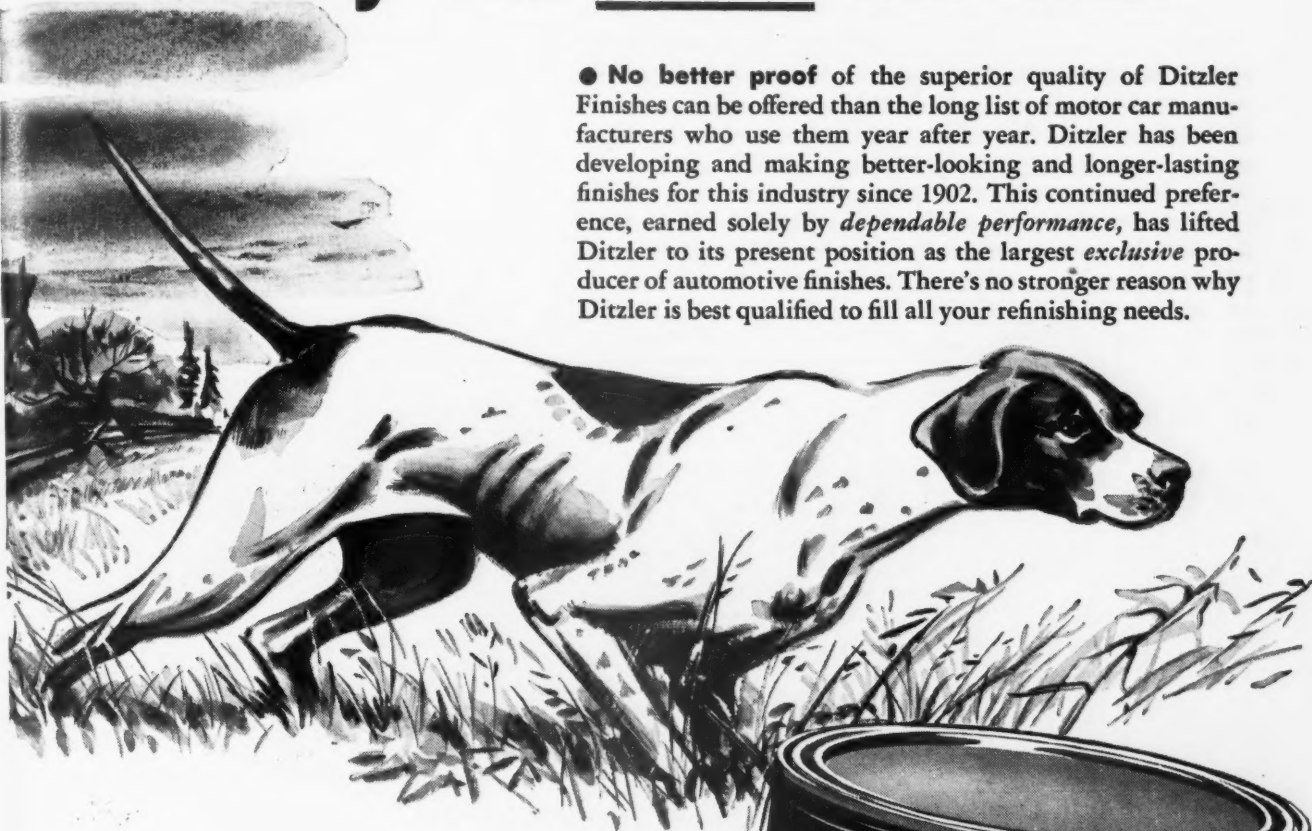
Following are prices at factory for cars with standard equipment as of December 26, 1952
State or local taxes, transportation and finance charges and optional equipment are extra.

BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight
BUICK*					DE SOTO†*					KAISER*					PACKARD* (Continued)				
Special 40					Powermaster 6					Manhattan					300				
Sedan, DeL., 2d					Club Coupe	2259	175	2434	3495	Club Sedan	2395	202	2597	3235	Sed. Conv., 4d	2975	259	3234	3960
Sedan, DeL., 4d					Sedan, 4d, 6p	2279	177	2456	3555	Sedan, 4d	2444	206	2650	3265	400				
Rivra, Cpe.					Sedan, 4d, 8p	3032	234	3266		Traveler, 4d	2542	213	2755		Sed. Pat., 4d	3438	297	3735	4190
Conv. Cpe.					Sportsman	2582	199	2781	3595	DeLuxe									
Super 50					Stat. Wagon	2871	222	3093	3855	Club Sedan	2267	192	2459	3150					
Rivra, Cpe., 2d			3845		Firestone 8					Sedan, 4d	2317	196	2513	3200					
Rivra, Sed., 4d			3905		Club Coupe	2523	195	2718	3640	Traveler	2315	204	2619						
Conv. Cpe., 2d			4035		Sedan, 4d, 6p	2543	197	2740	3705	Dragon									
Est. Wagon, 4d			4150		Sportsman	2850	219	3069	3765	Hardtop	3628	296	3924	3320					
R'dmaster 70					Conv. Coupe	2945	227	3172	3965						PLYMOUTH†*				
Rivra, Sed., 4d			4100		Stat. Wagon	3125	241	3366	3990						Cambridge				
Rivra, Cpe., 2d			4125		Sedan, 8p	3290	254	3544							Coupe, 3p	1535	125	1660	2875
Conv. Cpe., 2d			4250							LINCOLN					Suburban	1925	155	2080	3120
Est. Wagon, 4d			4315							Cosmopolitan	3198			4125	Club Sedan	1650	134	1784	2930
					DODGE†*					Sedan, 4d	3293			4155	Sedan, 4d	1685	137	1822	2970
					Mdowbrk. Spec.	1882	147	2029	3100	Capri					Cranbrook				
CADILLAC					Club Coupe	1921	150	2071	3198	Sedan, 4d	3331			4140	Club Coupe	1744	139	1883	2955
Series 62					Meadowbrk.					Sport Coupe	3518			4235	Sedan, 4d	1772	142	1914	3007
Spt. Coupe	3266		4120		Club Coupe	1980	154	2134	3135	Convertible	3665			4350	Belvedere	1975	157	2132	3011
Tour. Sedan	3354		4125		Sedan, 4d	2007	157	2164	3225						Conv. Coupe	2120	168	2288	3177
Cpe. deVille	3658		4200		Suburban	2072	161	2233	3195						Savoy	2058	164	2222	3155
Conv. Cpe.	3796		4390		Coronet					MERCURY									
Series 60					Club Coupe	2151	168	2319	3320	Customline					Chieftain 6				
Tour. Sedan	3934		4275		Sedan	2178	170	2348	3385	Two Door	1987			3335	Sedan, 2d	1788	168	1956	3341
Series 75					Diplomat	2375	185	2560	3280	Four Door	2040			3390	Sedan, 4d	1843	172	2015	3381
Tour. Sedan	3941		4770		Sierra	2441	190	2631	3450	Sport Coupe	2100			3435	DeL. Sed., 2d	1885	175	2060	3356
Imp. Sedan	5139		4790		Conv. Cpe.	2499	194	2693	3450	Sta. Wagon, 6p	2525				DeL. Sed., 4d	1940	179	2119	3386
										Sta. Wagon, 8p	2570			3795	DeL. Catalina	2112	192	2304	3416
CHEVROLET										Monterey					Cust. Catalina	2174	196	2370	3416
Styl. Spec. KJ					FORD*					Four Door	2115			3375	DeL. Conv. Cpe.	2242	202	2444	3546
Bus. Coupe, 2d	1390	129	1519	3045	Mainline 6	1400			2977	Sport Coupe	2225			3520	St. Wg., 2 St. Pt.	2248	202	2450	3606
Sedan, 2d	1469	134	1603	3085	Bus. Coupe	1497			3057	Convertible	2370			3635	St. Wg., 3 St. Pt.	2299	206	2505	3633
Sport Coupe	1474	135	1609	3050	Tudor	1542			3105						St. Wg., 2 St. Gr.	2322	208	2530	3606
Sedan, 4d	1519	140	1659	3115	Ranch Wagon	1846			3294	NASH					Dix. St. Wg., Pt.	2378	212	2590	3636
Styl. DeL. KK					Customline 6					Rambler Super	1828	162	1990	2515	Dix. St. Wg., Gr.	2452	218	2670	3636
Sedan, 2d	1553	143	1696	3110	Tudor	1582			3067	Suburban, 2d					Chieftain 8				
Sport Coupe	1570	145	1715	3100	Club Coupe	1591			3046	Cty. Cld. Sed., 2d	1912	168	2080	2420	Sedan, 2d	1858	173	2031	3421
Sedan, 4d	1603	146	1749	3145	Fordor	1628			3115	Conv. Sedan, 2d	1936	168	2104	2430	Sedan, 4d	1913	177	2090	3456
Bel Air Coupe	1827	165	1992	3215	Mainline 8	1471			3058	Stat. Wagon, 2d	1936	168	2104	2515	DeL. Sed., 2d	1955	181	2136	3436
Conv. Coupe	1939	174	2113	3380	Bus. Coupe	1567			3126	States'n Super	1947	178	2125		DeL. Sed., 4d	2010	184	2194	3471
Sta. Wagon	2096	185	2281	3475	Tudor	1613			3171	Sedan, 4d	1982	178	2160	3045	DeL. Catalina	2182	198	2380	3496
Fttn. DeL. KK					Ranch Wagon	1917			3406	States'n Cust.					Cust. Catalina	2244	202	2446	3496
Sedan, 2d	1553	143	1696	3110	Club Coupe	1662			3121	Sedan, 2d	2102	188	2290		DeL. Conv. Cpe.	2312	206	2518	3626
					Tudor	1653			3133	Sedan, 4d	2124	188	2312	3070	St. Wg., 2 St. Pt.	2318	207	2525	3686
CHRYSLER†*					Fordor	1688			3193	Amb. Super	2291	207	2498		St. Wg., 3 St. Pt.	2369	211	2580	3713
Windor 8					Country Sed.	2076			3539	Sedan, 4d	2327	207	2534	3430	St. Wg., 2 St. Gr.	2392	213	2605	3686
Club Coupe	2371	184	2555	3595	Crestline 8					Amb. Cust.					St. Wg., 3 St. Gr.	2443	217	2660	3713
Sedan, 4d, 6p	2382	185	2577	3655	Victoria	1941			3250	Sedan, 2d	2453	218	2671		Dix. St. Wg., Pt.	2448	216	2684	3716
Twn. and Cty.	3045	234	3279	3955	Sunliner	2043			3334	Sedan, 4d	2474	218	2692	3480	Dix. St. Wg., Gr.	2522	222	2744	3716
Sedan, 4d, 6p	3177	244	3421		Country Sq.	2203			3609	OLDSMOBILE					STUDEBAKER				
Wind. DeL. 8										DeLuxe 88					Champ. Cust.				
Sedan, 4d	2605	201	2806	3770	HENRY J*					Sedan, 2d	2066		2262	3565	Sedan, 2d, 6p	1574	150	1724	2655
Newport	2940	226	3168	3770	Corsair	1379	120	1499	2395	Sedan, 4d	2126		2327	3608	Sedan, 4d, 6p	1600	152	1752	2660
Conv. Coupe	3055	235	3290	4000	Sedan, 2d	1553	133	1686	2445	Sedan, 2d	2189				Sedan, 4d, 6p	1606	151	1757	2695
New Yorker 8					DeL. Sed., 2d					Sedan, 4d	2252				Champ. DeL.				
Club Coupe	3097	239	3336	3920						Holiday	2448				Sedan, 2d	1661	155	1816	2685
Sedan, 4d, 6p	3124	241	3365	4000	HUDSON*					Conv. Coupe	2615				Coupe, 5p	1687	156	1843	2675
Twn. and Cty.	3787	290	4077	4260	Wasp	2063				Sedan, 4d	2552				Sedan, 4d	1692	157	1849	2720
Sedan, 4d, 8p	4053	310	4363	4015	Sedan, 2d	2106				Holiday	2771				Champ. Regal				
Newport	3512	270	3782	4015	Club Cpe.	2106				Conv. Coupe	2963				Sedan, 2d	1739	161	1900	2690
N. Y. DeL. 8					Super Wasp	2203									Coupe, 5p	1765	163	1928	2695
Club Cpe.	3222	248	3470		Sedan, 2d	2252				PACKARD*					Sedan, 4d	1770	163	1933	2725
Sedan, 4d, 6p	3274	252	3526	4020	Club Cpe.	2252				Clipper					Starliner	2038	182	2220	2860
Newport	3662	281	3943	4020	Hollywood	2573				Club Sedan, 2d	2334	200	2534	3685	Soft Conv.	2071	186	2257	2870
Conv. Coupe	3738	287	4025		Conv. Brghm.	2792				Club Sedan, 4d, 6p	2384	204	2588	3715	Commander				
Cust. Imp. 8					Hornet					Clipper DeL.					Regal				
Sedan, 4d, 6p	3925	300	4225	4425	Club Cpe.	2505				Sedan, 2d	2471	210	2681	3705	Sedan, 2d	1894	178	2072	3040
Town Limo.	4425	337	4762	4525	Sedan, 4d	2529				Sedan, 4d, 6p	2521	214	2735	3745	Coupe, 5p	1921	180	2101	3030
					Hollywood	2833				Sportster Cpe.	2521	218	2795	3685	Sedan, 4d	1927	180	2107	3085
CROSLLEY					Conv. Brghm.	3061				Packard					State				
Bus. Coupe	874	69	943	1340						Mayfair Cpe.	3006	262	3268	3890	Sedan, 2d	1974	184	2158	3055
Hotshot Rdst.	882	70	952	1175						Conv. Coupe	3200	276	3476	4110	Coupe, 5p	2001	186	2187	3025
Stat. Wagon	928	74	1002	1403											Sedan, 4d	2006	187	2193	3075
Spts. Roadstr.	953	76	1029	1175											Land Cruiser	2151	198	2349	3155
Sedan	957	78	1033	1363											Starliner	2282	206	2488	3220
Conv. Sedan	959	77	1036	1320											Soft Conv.	2320	211	2531	3230
Super. Sta. Wag.	997	80	1077	1403											WILLYS				
															DeL. Sedan, 2d	1587	153	1740	2457
															Sup. Di. Sed., 2d	1824	165	1989	2570
															Cust. Sedan, 2d	1903	171	2074	2584
															Conv. Coupe	2040			

† Prices do not include delivery and handling charges.

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DITZLER COLOR DIVISION, Pittsburgh Plate Glass Co., Detroit 4, Mich.



PITTSBURGH PLATE GLASS COMPANY

20

ABBREVIATIONS

—1953 Models.
—Powertech chassis model available at
(a)—Series 40, 131 $\frac{1}{2}$; Series 50, 18 when equipped with Dynaford transmission.
(b)—Top ring $\frac{1}{2}$; second ring $\frac{1}{4}$.
(c)—N 121 $\frac{1}{2}$; 125 $\frac{1}{2}$; 125 $\frac{1}{2}$ Post Imp.
(d)—N 131 $\frac{1}{2}$; Crown Imp. 145 $\frac{1}{2}$ Imp.
(e)—Left side to be $\frac{1}{4}$ to $\frac{1}{2}$ higher than right side, within these limits.
(f)—Dwell meter for setting point opening is not recommended.

(a)—121 $\frac{1}{2}$, 125 $\frac{1}{2}$, 125 $\frac{1}{2}$ Post Imp.
(b)—Off seat.
(c)—N 131 $\frac{1}{2}$; Crown Imp. 145 $\frac{1}{2}$ Imp. are used.
(d)—Dwell meter for setting point opening is not recommended.

(f)—Upper $\frac{1}{2}$, lower $\frac{1}{4}$.
(g)—With heat-treated Hydrin.
(h)—Al 15; CH 18; AC 46-5.
(i)—2602, 26; 2606, 27.
(j)—115; 116; 117.
(k)—Top; bottom— $\frac{1}{4}$.
(l)—14 $\frac{1}{2}$, 11 $\frac{1}{2}$.
(m)—D47.
(n)—D47.
(o)—D47.
(p)—D47.
(q)—D47.
(r)—D47.
(s)—D47.
(t)—D47.
(u)—D47.
(v)—D47.
(w)—D47.
(x)—D47.
(y)—D47.
(z)—D47.

(1)—C-50, 61 $\frac{1}{2}$ -8.
(2)—115-3600 with std. trans.; 118-3800 with heat-treated Hydrin.
(3)—115-3600 with std. trans.; 122-3600 with Hydrin.
(4)—7.0 with std. trans.; 7.7 with Hydra.
(5)—6.8 with std. trans.; 7.7 with Hydra.
(6)—018 opening; 020 closing.
(7)—Upper $\frac{1}{2}$, lower $\frac{1}{4}$.
(8)—Al 15; CH 18; AC 46-5.
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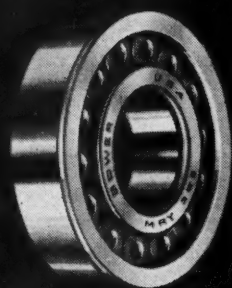
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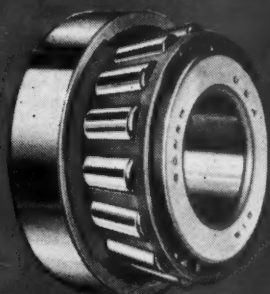
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Bower

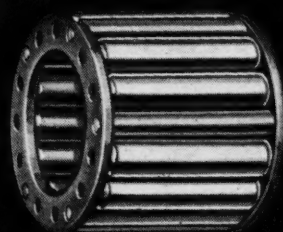
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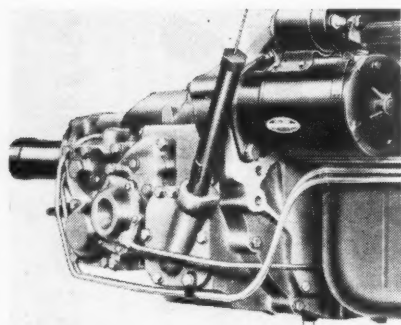
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Clearing House Continued from Page 65

be necessary to install a new oil seal at the universal joint. There also might be a possibility of the



oil being drawn into the manifold through a faulty diaphragm in the modulator on the transmission.

Doing Valve Job on Cars With Hydraulic Lifters

Will you please give me your idea as to the best method of doing a valve job on Chevrolet cars with hydraulic valve lifters. I would also appreciate any information you can give me on installing a 1939 Chevrolet passenger car engine in a 1942 Chevrolet, 1/2 ton pickup. What changes are necessary and the easiest method of making the installation?

L. H. Shaw
Shaw's Garage
No. Granby, Conn.

DOING a valve job on Chevrolet engines equipped with hydraulic valve lifters is about the same as the conventional job except for the adjustment and trouble-shooting for noisy lifters. If the lifters are quiet before the job is torn apart, don't disturb them.

After installing the rocker arms it will be necessary to make an initial adjustment on each lifter. The best method of doing this is to crank the engine until the rotor points to the number one spark plug wire in the distributor cap. No. 1 cylinder will be in firing position. Turn down the adjusting screws on exhaust and intake valves until all lash is removed. Then from this point continue turning the screw down exactly 1 1/2 turns and tighten the lock nut. Then proceed doing the other five cylinders according to the firing order.

The 1939 Chevrolet engine should interchange without making any changes other than the transmission. To use the conventional 1/2 ton transmission it will be necessary to change the flywheel housing.

Problems in Racing '36 Ford on Dirt Track

We have a 1936 Ford 4-door sedan which we have stripped down and are using for stock car racing. We cannot seem to keep shock absorbers on this car and it does not handle well on the track. We would like to know if you can tell us how to make the car handle better, because we race on a dirt track which is very rough. Could you tell us how to speed up the rpm, without adding special equipment because we have to keep the car strictly stock?

Also would you have any information on how a Ford midget racing car distributor is set up?

George Tracy
Harry Tracy & Sons
Calais, Maine

YOU mentioned that shocks cannot be kept on this car. I was wondering whether you mean they become inactive in working or just work loose. Also are they original equipment or direct acting? Working loose should be no problem as drilling the studs and cotter pinning them should hold them.

My suggestion would be to install a sway bar on the front and rear

end and to also install shock absorbers that have been used for a while. To get more rpm without adding special equipment remove the valves and polish the inside of the intake manifold. Also the valve ports and the tops of the valve guides should be done.

This is the information I managed to locate on the setting up of the Ford "60" distributor for midget racing. Use a four cell hot shot battery or four dry cells. Take a distributor that has been completely checked. Add an additional spring on each of the movable arms. Block out the vacuum advance. Elongate the hole on the side of the distributor to allow more advance on the timing.

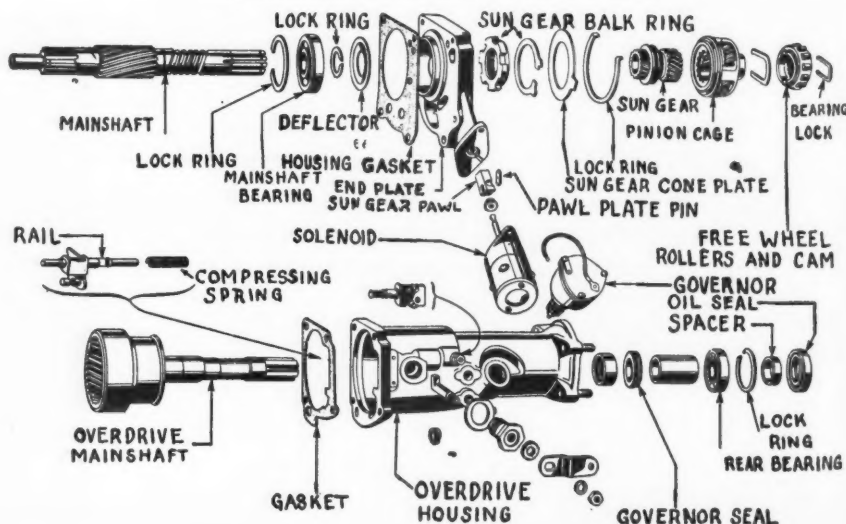
How to Replace Snap Ring In Mercury Overdrive

We have a 1950 Mercury in which we had to install a new second gear. We found the large snap ring in the rear of the overdrive housing broken. How can we get this snap ring out or how do we take the transmission down in some way to remove the snap ring?

Alvie Watson Garage
Lola, Kentucky

IN order to replace the large snap ring in the overdrive housing, it will be necessary to remove the transmission and then unbolt the OD unit from the transmission. Remove the solenoid, relay and shift lever. Expand the lock ring and drive the tail shaft out of the housing. Then the ring can be pried out of the housing.

Exploded view of Mercury Overdrive Unit



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—on any car, truck, bus or tractor*

For genuine quality and coverage, the group of lines your NAPA Jobber stocks cannot be surpassed. Many of these NAPA lines are widely used as original equipment. All are produced by manufacturers known and respected throughout the industry. And combined with this dependable, uniform standard of quality, your NAPA Jobber is equipped to offer you exceptional service. Even rarely used, "emergency" numbers he

can put in your hands in record time . . . by drawing on factory-type master stocks in the nearby NAPA Warehouse. This unbeatable NAPA combination of quality-coverage-service is yours in any purchase you make from your NAPA Jobber. Wouldn't it pay you to concentrate *your* parts business with *him*?

NATIONAL AUTOMOTIVE PARTS ASSOCIATION • DETROIT 1

for genuine quality • genuine service

Your N.A.P.A. Jobber is a good man to know!

transmission. For mountain operation a special ratio of 4.27 to 1 is available. In addition, there is an economy ratio of 3.31. With overdrive—the gear ratio is 4.27 to 1 standard, 4.1 to 1 optional; with Hydra-Matic, 3.54 to 1 is standard, 3.31 to 1 optional.

Standard tire size on the Jet is 5.90 x 15; on the Super Jet, 6.40 x

15. The latter size is available on the Jet at extra cost.

Another new addition to the 1953 Hudson line is the Super Wasp, powered by the H-127 engine. This engine has a compression ratio of 7.2 to 1 with optional aluminum head and 6.7 to 1 with the standard head. The lower priced Wasp is powered by the H-112 engine, of-

fering the same compression ratios as mentioned above, but with a displacement of 232 cu. in. as compared with 262 for the Super Wasp. The Super Wasp offers more luxurious upholstery, trim and other appointments than does the Wasp.

The Hornet and Super Wasp have restyled front ends, with air-scoop type hood ornaments. The Wasp is distinguished by its triangular hood ornament set low over the illuminated Hudson emblem.

The Hornet continues with its 308 cu. in. H-145 engine, which has 7.2 to 1 compression ratio. The aluminum pistons have their rings pinned in position to prevent chatter, rotation and irregular wear.

Steering is said to be improved on the new models with an improved center-point steering and stepped up steering gear ratios.

Dual-range Hydra-Matic drive is available on all models, and overdrive is optional on manual shift, synchromesh transmissions.

POWER-PUNCH

for modern engines

HOT SPARK

NIE-TRON

super heavy duty coil

The guts, the performance, the *reserve power* you need to meet top demands of today's improved engines. Much greater secondary output than standard coils, with hot spark at high speeds. No extra draw or overload on primary system, precluding point failure and need of high-capacity condenser. Will fire an engine on as low as 2 volts.

NO NEED FOR HIGH CAPACITY CONDENSER
RECOMMENDED FOR ALL 6-VOLT SYSTEMS
MAXIMUM INSULATION
UNIVERSAL BRACKETS FURNISHED FOR ALL POPULAR MAKES AND MODELS CARS, TRUCKS, BUSES, TRACTORS

C.E. NIEHOFF & CO.
 4925 W. LAWRENCE AVE. • CHICAGO 30, ILL.



Built for the BRUTE JOBS of today!

Send for Detailed Information

BRANCHES:

Boston 34, Mass., 254 Brighton Ave.
 Los Angeles 15, Cal., 1330 W. Olympic Blvd.
 New York 19, N. Y., 250 W. 54th St.



DeVilbiss Announces School Schedule

The schedule for the first half of 1953 is being announced by the DeVilbiss Company for tuition-free courses of instruction in automotive refinishing.

Applications should be made as early as possible for enrolling shop superintendents, service managers, spray operators and any others who wish to attend the week-long classes of February 23 or May 25.

Applications for both classes on the new schedule should be sent now to the DeVilbiss Company, Toledo 1, Ohio. Those interested may request School Form INS-753-A.

Valve Jobs Pay Off when you switch to Black & Decker Power!

Black & Decker Deluxe Super-Service VALVE REFACER \$360.00 complete!

Equipped for complete job, no extras to buy! Requires no complicated adjustments. Permits traverse grinding of any angle valve face from 0° to 90°. Handles all popular stem sizes and head diameters. Both wheels can be used for wet grinding.



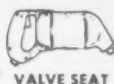
DRILLS



SANDERS



POLISHERS



VALVE SEAT GRINDERS

Speed *plus* precision . . . that's what you need to turn out accurate valve jobs at a profit. And that's what you get with a Black & Decker Valve Refacer!

This precision-built machine is engineered for factory-accuracy . . . has hypoid gears for smoothest grinding finish; 4-point bearing suspension on both work and wheel tables; bearing adjustment on feed screws with automatic end play take-up. It gives you such work-speeding features as smooth, abundant power from two B&D motors independently driving collet and wheel spindles; super-speed feed screws; easy-to-operate controls.

Try one at your nearby Black & Decker Distributor. Let him demonstrate to you why it pays to switch to Black & Decker POWER . . . for speed, precision and profits! Write today for free catalog to: THE BLACK & DECKER MFG. Co., 620 Pennsylvania Ave., Towson 4, Maryland.



cally designed for 12-volt operation, features a larger diameter housing and cap. Two small vertical ribs are formed on the inner surface of the cap between terminals to increase the length of the leakage path between adjacent terminals. In addition, the distributor cap is made higher to permit use of a higher rotor to eliminate

arcing between the rotor and breaker plate or distributor housing. The distributor also has a quicker acting breaker point cam, opening and closing faster to allow more time for build-up of primary current.

One significant change in sheet metal this year is the adoption of an alligator type hood, spring bal-

anced to hold any position. The main hood lock can be released through a single cable connection to the instrument panel.

Wiring harness has been revised on all models to facilitate installation due to the alligator hood arrangement. In addition, all electrical elements and wiring for Series 50 and 70 have been revised or completely redesigned for the 12-volt system.

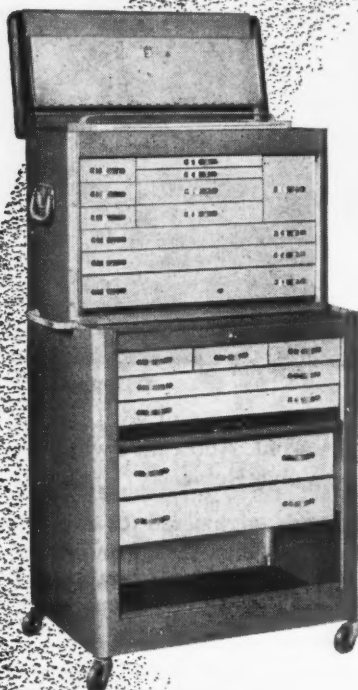
The exhaust system used with V-8 engines is composed of two separate exhaust pipe sections together with an oval-shaped dynamic flow muffler, and a tailpipe. The front exhaust pipe assembly is made up of a pair of two-inch pipes. The left pipe crosses from the exhaust manifold under the front of the engine and joins the right pipe to form a "Y."

In addition to its regular line, Buick will have in production its earlier publicized sport car—The Buick Skylark, to be known as model 76X. The convertible top is made of du Pont Orlon in a choice of black or white. The top is lower than on the 76C model as a result of using a lower windshield, the front and back seat cushions being lowered to retain ample head room.

Fenders are similar to 1953 Series 70, except that front fenders have higher cut wheel openings to show off the wire wheels, thus eliminating the characteristic Buick ports. Similarly, rear fenders have an in-

(Continued on page 108)

**I WOULDN'T BE
WITHOUT MY
HUOT TOOL CHEST**



No. 100 Tool Chest mounted on No. 250 Porta Cab. More drawers, more space, more tool box—that's what you get with the Model 100 Chest. Then when you mount it on a Huot Porta Cab, you have rolling storage for all your tools. Built-in locks . . . man-sized handles . . . small drawers lined to protect precision tools. Made of heavy gauge steel, finished with two tone hammered baked enamel. *Porta Cab*: 18"x26½"x33"; *Chest*: 26¼"x12¼"x18¾". Portable tote tray included with chest.

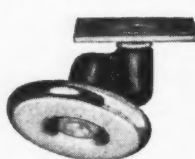
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HUOT MANUFACTURING CO.
585 No. Wheeler Avenue • St. Paul W4, Minn.

Huot is pronounced "Hew-ot".



NO. 101 TOOL CHEST
Man-sized handles, deep drawers, small drawers lined, tote tray, built-in lock.
12¼"x14¼"x26¼"



**"FLYING
SAUCER"**

Caster rolls at a 45° angle, turns quickly, easily climbs over wires and litter.

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HUOT MFG. CO., 585 No. Wheeler Ave. • St. Paul W4, Minnesota
Please send bulletin on Tool Chests and Cabinets

Name _____

Address _____



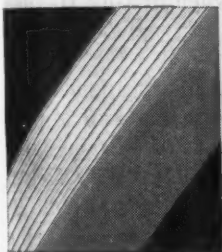
"We took care of your usual order
Sir—want anything special today,
like gas or oil?"

IT'S HERE!

The new champion of the
automotive replacement ring field

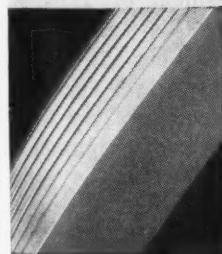
American Hammered Krome-Oil Piston Ring Set

The new, **PRE-SEATED** piston ring set that delivers
premium performance. Pre-seating makes the difference!



That is why early break-in, long life and exceptional oil control are assured when you install the new American Hammered Krome-Oil Piston Ring Set.

The top illustration shows the Krome-faced compression ring of a Krome-Oil Ring Set before it has been pre-seated. If installed as it is, the long-wearing qualities of Krome would prolong the break-in period.



The second illustration shows the ring after it has been scientifically pre-seated at the factory by a precision lapping method equivalent to 300 to 500 miles of actual operation. The smooth, even bearing of the narrow contact surface guarantees quick seating and fast oil control. In addition, the machine threaded finish on the face carries a thin film of oil, providing lubrication during the break-in period.

Krome-Oil KO's gas and oil waste

Krome-Oil KO's short ring life

Krome-Oil KO's sludge clogged oil rings and springs



The steel oil ring in this set features Krome-faced steel rails, further assurance of premium performance for your customers.

The free-flowing spring used in the American Hammered Krome-Oil Piston Ring Set has more oil slots than any other on the market. Its unique slot design assures maximum oil control over a long period of operation.



American Hammered

AUTOMOTIVE REPLACEMENT DIVISION

2001 Sanford Street, Muskegon, Michigan

Manufacturers of American Hammered Automotive Replacement Piston Rings

**Photographic evidence of
efficient American
Hammered Krome-Oil
break-in**

This top groove American Hammered Krome-Oil Compression Ring is from a set which was pulled after five thousand miles of use in a heavy duty and extremely rugged fleet operation. In the enlarged photograph at the left, note the smooth, even way it is wearing in. High unit pressure and narrow land contact, coupled with the long wearing qualities of Krome, impart maximum efficiency and durability to American Hammered Krome-Oil Piston Ring Sets.



Remember Profit-Packed American Hammered Power-Plus Service—Keeetherizing • GI-60 Groove Insert • Dry Film Lubricant

A Better Buick Continued from Page 106

crease in wheel opening to frame the wire wheels.

E-Z-Eye glass is standard equipment.

Coming to mechanical details, the chassis frame is the same as the Series 76C, except that it is lowered by $\frac{3}{4}$ in. Bendix vacuum power brakes are installed as standard equipment.

Saginaw power steering is standard equipment, the steering wheel being dropped by $1\frac{1}{2}$ in. in keeping with lower front seat level. Hydraulic window lifts are standard.

Exposed bolt circle wire wheels and white side-wall tires are standard equipment. Chromium-plated over all, the wheels have 40 indi-

vidually replaceable spokes, assembled in four rows, supporting a $15 \times 6\frac{1}{2}$ in. drop center rim.

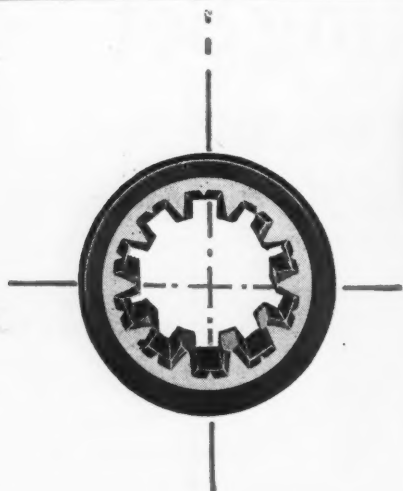
Major accessory items — Selectronic radio with foot-operated switch, and heater and defroster equipment all are standard on this model.

Other chassis elements as well as powerplant and drive remain the same as on Series 70 cars.

P.A.T.A. Elects Officers

John B. White was elected President of the Philadelphia Automobile Trade Assn. before 300 dealers and guests at its 50th Annual Meeting held in Philadelphia, last month. The new officers including White, who is president of John B. White, Inc., Ford, are M. B. Janes of John F. Daly, Inc., Ford, Vice President; William T. Plachter of Plachter Cadillac & Oldsmobile Inc., Treasurer; Guy Hayden of Guy Hayden Motors, DeSoto-Plymouth, Secretary.

The P.A.T.A. Distinguished Service Awards were made to Martin H. Bury, president of Wilkie Buick Corp., for his article "Why Is An Automobile Dealer," to John H. Fassitt for his long service to the Trade Association, and to Thos. B. Martindale, president of Thos. B. Martindale, Inc., Chairman of the 50th Anniversary Celebration. Mr. Martindale received two citations. He is the first member of the Association to receive the Distinguished Service Award and at the same time Honorary Life Membership in P.A.T.A.



EASIER TO INSTALL

Pointed splines on the hub of the Accurate Powerflex clutch plate automatically line up the splines of the transmission shaft, making it easy for the mechanic to insert the shaft through the plate hub. Save valuable time. Prevent burred splines, bent plates. It's another Accurate exclusive! Powerflex plates are engineered specifically to meet the special needs of the repair shop. That's why they're easier to install and why they deliver more miles of trouble-free clutch service.



Exclusive Features of the POWERFLEX CLUTCH PLATE

- Self-Aligning Hub Splines
- Flat-Top Cushion
- Spring Supports
- Safety Stops

WRITE FOR DETAILS



There's a New Powerflex Clutch Plate
in Every ReNu-Accurate Clutch Set



Accurate Parts Mfg. Co.
12435 EUCLID AVENUE • CLEVELAND 6, OHIO



"Play cards! You'll have plenty of time to gossip when you're saying goodnight at the door!"

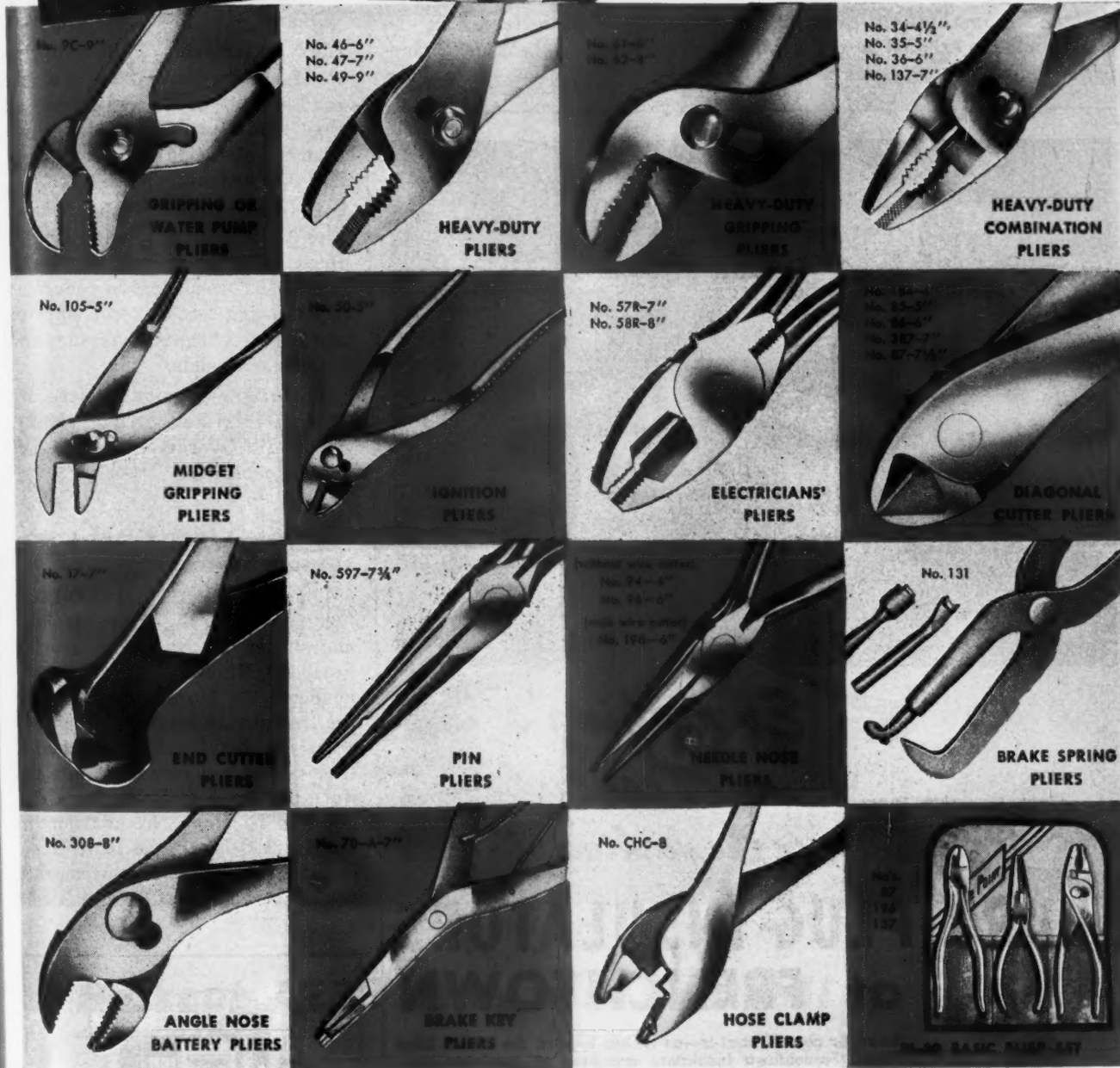
Snap-on

VACUUM GRIP PLIERS



...handle every plier job faster, easier, safer...and they'll outlast several pairs of ordinary pliers...SNAP-ONS are favorites in our shop."

Robert W. Rumpf, Service Manager,
S-W-S Chevrolet Co., Dayton, Ohio



SNAP-ON PLIERS are better because they are built to the most exacting standards that specialized engineering, advanced metallurgy and painstaking skill can produce. Jaws, cutting edges and joints are locally hardened to give exact degree of toughness for greatest durability. Look them over—handle them—try them next time your Snap-on man calls! For 104-page catalog of 4000 Snap-on tools, write...

SNAP-ON TOOLS CORPORATION

8036-A 28th Avenue, Kenosha, Wisconsin

*Snap-on is the trademark of Snap-on Tools Corporation



modifications without increasing the overall engine efficiency and displacement. Compression ratio has been boosted from 7.0 to 1 to 7.45 to 1. A new double-barrel carburetor is used. Intake manifold passages have been enlarged. Combustion chambers have been redesigned. A new high-lift camshaft is used and the exhaust system has been improved.

In the Ambassador models the 6-cylinder overhead valve engine is retained, and an optional LeMans Dual Jetfire engine is offered. The LeMans 6-cylinder overhead valve engine, offering 140 horsepower at 4000 rpm, is basically the same engine which powered the Nash-Healey in the twenty-four hour LeMans Endurance Race.



*Everything's
under control
in the making of*

SPARK PLUG INSULATORS at FRENCHTOWN



Scientific control, that is—as shown here at the tunnel kilns where Frenchtown Insulators are fired at predetermined, uniform temperatures.

Such controls which extend throughout all manufacturing processes help give Frenchtown porcelain products the excellent dielectric and mechanical strength so essential in high voltage insulation. These are the qualities that pay off in spark plug performance. And your best assurance of customer satisfaction is to be sure the spark plugs you sell are made with Frenchtown insulators. They are used by more spark plug manufacturers than those of any other independent maker of insulators.

FRENCHTOWN PORCELAIN COMPANY

8 Mulrhead Avenue

Trenton, N. J.

This engine has two side-draft carburetors which work in conjunction with an oversized "Sealed-in Iso-Thermal" intake manifold. Like the Super Jetfire engine, its seven-bearing crankshaft is 100 percent counterbalanced.

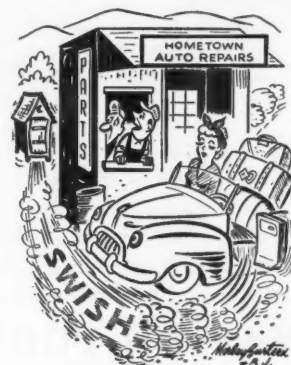
The power steering which is optional on the Ambassador provides direct hydraulic actuation of the steering linkage. This type steering eliminates 75 percent of the effort in steering while allowing the driver to retail the feel of the road at all speeds and under all road conditions. This system gives positive directional control, even with the hydraulic power off.

Suspension remains the same. It uses vertical coil springs located above the steering knuckles which take loads, resulting in reduction of unsprung leaf and coil springs on the rear of the Ambassador and Statesman models.

Three transmission choices are offered: Dual Range Hydra-Matic, Automatic Overdrive, and Standard Synchromesh.

Spark-O-Liner Company Repurchased

Repurchase of the Spark-O-Liner Company by L. Ray Hove, founder and owner of Hove Engineering Company, Minneapolis, has been announced. Mr. Hove has taken over the business he established in 1940 when he developed the patented spring-steel ball race to fit into the worn ball track of Delco-Remy distributor housings. In addition to the Spark-O-Liner, the Hove Engineering Company will now market several new ignition devices.



"Never mind—it's not car troubles."



Revlon's Treasurer and General Manager, Joseph Revson, with "Fire and Ice" girl Dorian Leigh

He kept 7,235 dates with this girl!

Five months ago she was just an idea. Today, as the temptress who sells Revlon's new "Fire and Ice" Lipstick and Nail Enamel, she's America's most talked-about glamour girl!

"She created the greatest shipping problem we ever had," says Joseph Revson. "7,235 stores wanted 'Fire and Ice' merchandise and displays — to be delivered *before* the promotion date of November 1.

"There was only one way to keep all

those dates! And as heavy re-orders flooded in, we continued to fill them via Air Express. Volume is now the heaviest in our history! In maintaining that momentum—and keeping the goodwill of the stores—Air Express service has been invaluable.

"We don't overlook costs, either. Air Express rates are the lowest in the field on practically every shipment we make. With a volume like ours, those savings add up to a very substantial figure!"



AIR EXPRESS

GETS THERE FIRST

Division of Railway Express Agency

MOST EXCITING NEWS IN B

Gatke

GUARANTEE

for



For the man who wants the best

Exclusive, patented Gatke grooved construction provides 3-Way Action:

- 1 — CLEANS! Keeps surfaces clean and prevents wear.
- 2 — COOLS! Circulates air — keeps brakes cool.
- 3 — DRIES! Wipes away water — keeps brake drums dry.

BRAKE LINING HISTORY!

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25,000 MILES

Only Gatke dares to make this sensational offer—because *only Gatke* can back it up! 39 years of brake lining manufacture have produced a lining that assures greater holding power,

smoother deceleration and long, trouble-free service. Get ahead of competition with the world's finest brake lining—Gatke A-T .42.

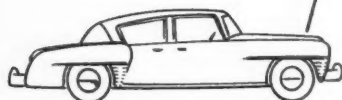
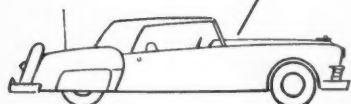
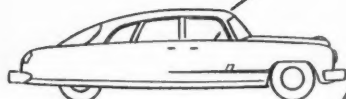
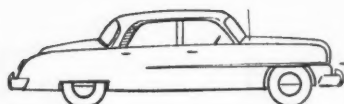
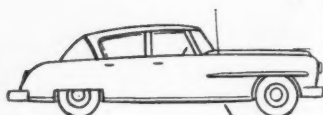
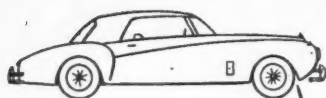
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GATKE CORPORATION

238 NORTH LA SALLE STREET, CHICAGO 1, ILLINOIS

39 Years of Leadership in Manufacturing Quality Brake Lining

DON'T ACCEPT LESS...



KESTER'S BEST

KESTER SOLDER COMPANY

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NEWARK 5, NEW JERSEY • BRANTFORD, CANADA

**KESTER
SOLDER**

Oldsmobile . . .

Continued from Page 63

The rear axle is new, now featuring a heavier and more rigid housing, heavier pinion shaft and bearings, and a change in axle ratios as follows: With Hydro-Matic drive, 3.42 to 1 on the 98; 3.23 to 1 on the 88's. With synchromesh transmission the ratio is 3.64 to 1 across the board.

The Bendix vacuum power brake installation, integral with the master cylinder is offered as optional equipment. When specified, it carries a wide brake pedal suspended from the dash, arranged in the plane of action of the accelerator pedal, thus permitting an easy swing of the toe from one pedal to the other.

The instrument panel has been completely redesigned, now includes the H-M transmission shift indicator arranged in a horizontal panel directly below the speedometer dial. Optional on the 98 models is a foam rubber safety pad mounted over the top of the instrument panel.

Frigidaire conditioning, offered as optional equipment, has been designed as an integral part of the car when specified. It consists of a condenser mounted ahead of the radiator core; the evaporator, mounted in the trunk and housed on the shelf; and a rotary type compressor similar to these supplied with Frigidaire equipment.



"Actually I wanted to be a great African explorer, but then I found out that I look like hell in shorts!"



You'll find it good business to install **PERFECTION** Certified Replacement Parts. The low installation cost wins the favor of your customers, and the dependable performance of these products makes your customers real boosters for you.

Behind the parts constituting this great line are over 30 years of **PERFECTION** manufacturing achievement. This important "know-how", the use of the finest materials, heat treating under scientific control, precision accuracy and rigid inspections throughout production—all contribute to furthering the fine reputation accorded **PERFECTION** products.

There is a **PERFECTION** jobber near you. He carries a representative stock of these quality parts and is prepared to render prompt, efficient, friendly service. If you do not know his name, write us.



Perfection Gear Company Harvey, Illinois

PERFECTION PRODUCTS INCLUDE: Silent Timing Gears, Metal Timing Gears, Silent Timing Chains, Sprocket Gears, Transmission Gears and Parts, Differential Ring Gears and Pinions, Differential Cases and Parts, Fly Wheel Gears, Clutch Plates, Pressure Plates, Clutch Cover Assembly Parts, Clutch Forks and Parts, Clutch Throwout Bearings, Clutch Rebuilders.

Chevrolet Redesigns . . . Continued from Page 61

so that the circulation is always maintained within the engine.

An automatic choke similar to the device on 1952 Powerglide engines is standard equipment. Generator capacity has been increased to 45 amperes.

Higher compression and the improved automatic transmission which saves gas in starts and at

cruising speeds are responsible for better gasoline mileage of the new Powerglide cars. The engine develops 115 horsepower at 3600 rpm. Compression is 7.5 to 1 and the axle ratio 3.55 to 1.

Several features have been included in the Powerglide engine in addition to many which make for smoother operation in the

standard power plant. Aluminum pistons are installed. Being lighter, bearing loads are reduced and the use of aluminum eliminates the need for piston pin bushings. Pistons have cam-ground skirts and steel struts to control expansion. Steel backed, thin-wall connecting rod insert bearings have been adopted. Precision-built and with greater load-carrying ability, the new bearings are removable, an advantage in servicing.

Another important development is full pressure lubrication which provides oiling of the connecting rod bearings through passages in the crankshaft from the main bearings. The new system has involved



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Oil-Dri

TRADE MARK

ABSORBENTS

the modern, economical oil and grease absorbent that keeps your floors dry, clean and safe, and reduces maintenance costs.

SOLD THROUGH AUTHORIZED WHOLESALERS

• A 60-SECOND DEMONSTRATION WILL OPEN YOUR EYES!

Simply mail the coupon. A factory-trained representative will demonstrate on your own floors, how to obtain better floor housekeeping at lower costs.

MAIL COUPON TODAY

OIL-DRI CORPORATION OF AMERICA
520 N. Michigan Ave. Chicago 11, Illinois

☐ FREE DEMONSTRATION WANTED
☐ HAVE REPRESENTATIVE CALL

Name _____
Address _____
City _____ State _____



a re-design of the oil pump to provide more oil at higher pressures.

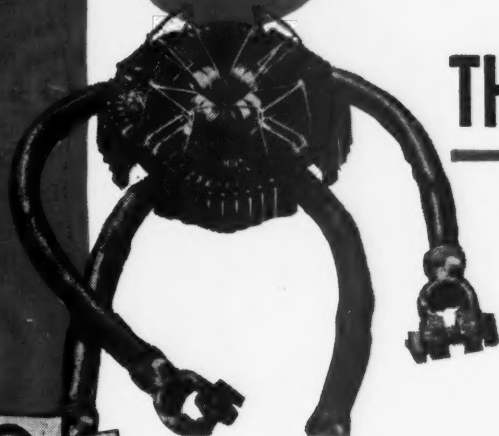
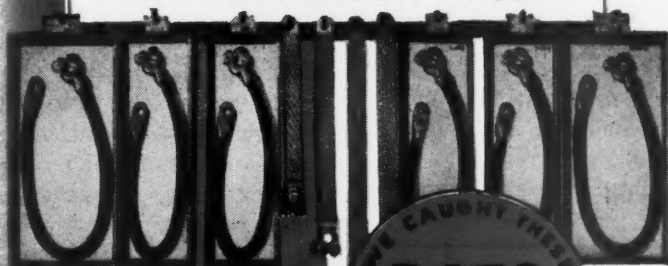
The Chevrolet application of power steering consists of a booster system actuated by a hydraulic pump driven from the crankshaft. The booster is inoperative until an effort of three pounds has been exerted on the rim of the steering wheel. The assistance of the booster becomes progressively greater, gradually taking over from the driver so that no more than a light effort is ever required. This controlled assistance assures the driver of a normal steering "feel," while at the same time eliminating exertion. As another safety factor, Chevrolet engineers point out, manual steering mechanism can operate independently of the hydraulic system.

Night driving is improved by the
(Continued on page 118)



**NEGLECTED WIRES
CAUSE**

AUTOMOBILE FIRES



THIS DISPLAY...

THIS "HOOD-RAISER"...

...and advertisements like this
help you get more than your share
of the battery cable business!



You've never seen anything like this
Crescent Wiry Joe battery cable mer-
chandising program! It's a real "hood-
raiser" designed to make it easy for
you to sell more battery cables. Ask
your jobber for details. Or write direct.



Check the wire and cable on every car!

THE CRESCENT COMPANY, INC., PAWTUCKET, RHODE ISLAND

Chevrolet Redesigns . . Continued from Page 118

Autronic Eye, which relieves the driver of switching from driving to passing beams when meeting another car, as prescribed by law in most states.

Primary control mechanism is a phototube mounted behind the windshield at the lower left corner. When the bright headlamps are on and a beam of predeter-

mined intensity strikes the phototube, a signal is produced which through amplification switches the headlamps to the lower or passing position. The "low" position continues as long as a beam of light remains on the tube. The floor button switch furnishes an overriding control should the driver want to flash his bright lights as a warn-

ing to oncoming automobiles.

The new Powerglide automatic transmission is improved for convenience, performance and operating economy. The provision of an automatic shift in Drive supplies a more rapid pick-up from starts and improved acceleration in traffic.

With the selector lever in Drive, the new transmission always starts in the low range and automatically upshifts to the cruising range as speed increases. At speeds below 40 miles per hour, the new Powerglide also downshifts automatically when called upon to provide higher speed for passing, hill climbing, or heavy going through mud, sand or snow. If the driver needs a burst of speed for passing in traffic, the downshift can be applied by regulation of the accelerator pedal.

Manual low is retained on the selector to provide extra engine braking when required and to permit rocking the vehicle out of ruts by shifting between Low and Reverse.

A larger, more efficient three-element torque converter is used, providing improved cruising economy and retaining the braking equivalent and low-speed push-starting characteristics of the previous five-element design.

In appearance the latest models are lower, but with an increase in headroom and legroom. The top of the bodies has been broadened to provide additional width while hood and trunk lines are more pronounced. Fender shapes, both front and rear, make the cars appear longer although over-all they are actually two inches shorter than last year largely due to a repositioning of the bumper. Wheelbase remains the same.

The three series of cars are differentiated by styling, both inside and out; by ornamentation, appointments for motoring convenience and the luxury of cushioning and trim. Designed to conform to a varied price range, they might be classified as "Standard" (One-Fifty), "De Luxe" (Two-Ten) and "Super De Luxe" (Bel Air).



New PROFITS FOR YOU THIS WINTER...

John **BEAN** **PECO**

SKID-DEFIER★

CUTS SNOW AND MUD CLEATS AS WELL AS DE-SKIDDING BOTH NEW AND OLD TIRES

REGULAR DE-SKIDDING ←

Gives 25% more traction on icy roads, increases tire life 15% — ALL your trade will want de-skidded tires.

MUD AND SNOW CLEATS →

Make snow tires from present tires on the Skid-Defier — then sell a set of new skid-defied tires in the spring.




Tire de-skidding is a year-round profit builder—get details from your Jobber today.

JOHN BEAN DIVISION

FOOD MACHINERY AND CHEMICAL CORPORATION

LANSING 4, MICHIGAN



WHEEL ALIGNERS AND CORRECTION TOOLS • WHEEL BALANCERS AND BALANCING TOOLS • WEIGHTS • STEAM CLEANERS • CAR WASHERS • HEADLIGHT TESTERS

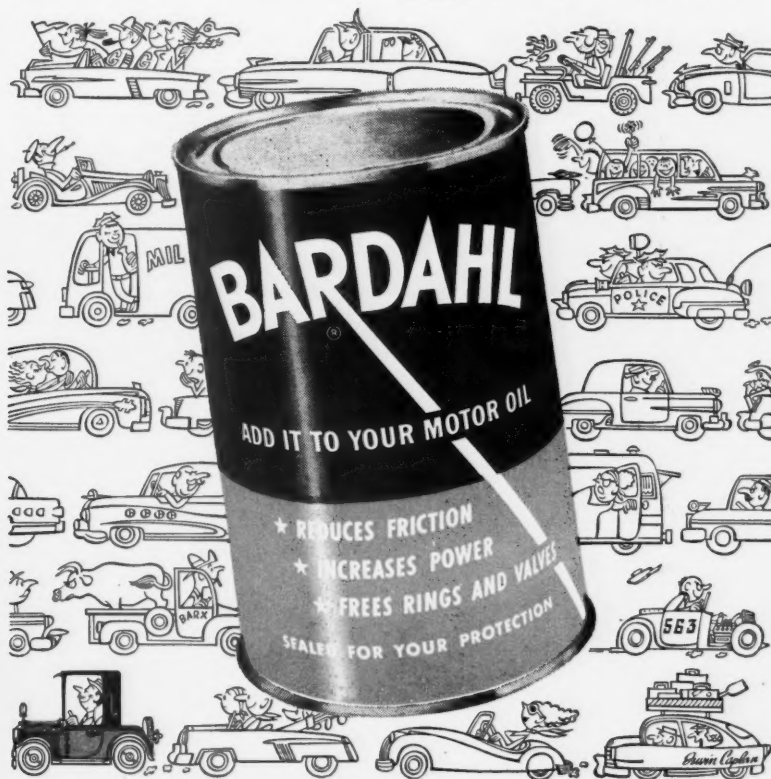
*TRADE MARK

WATCH for **BARDAHL** in Look!



Be Sure
to See
March 10
Issue
of **Look**
Kick-off for
Biggest
BARDAHL
Promotion
in History!

They all run better with...



Ask your dealer* to add a Quart!

BARDAHL: Seattle St. Louis Boston Vancouver Montreal Mexico City Oslo Antwerp Florence

*On sale at better gas stations,
new car dealers, garages
everywhere

Powerful 2-Color Pages in
America's Largest Magazines
LIFE · LOOK · POST
FARM JOURNAL
SPEED AGE

PLUS
Catchy
RADIO JINGLES

PLUS
Animated
TV SPOTS

PLUS
Easy-to-use
SALES DISPLAYS

Cash in on **BARDAHL**'s hot promotions for 1953!

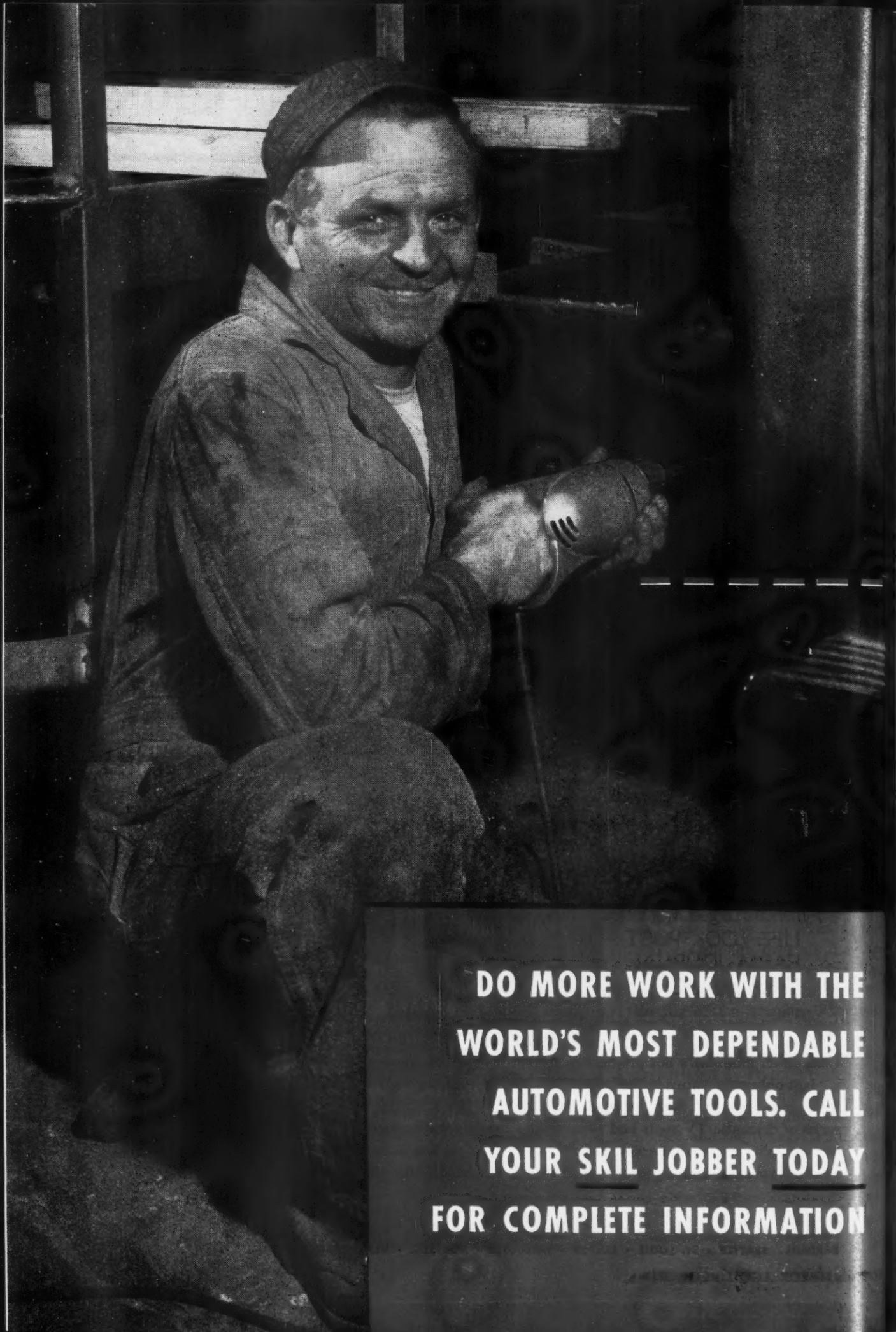
Not only **FULL PAGES** in the country's biggest magazines (like **LIFE**, **LOOK**, **POST**, etc.) . . . but a series of dramatic TV spots and radio jingles to hypo sales in your local market. They're built to wake up your customers and make 'em buy!

Ask your **BARDAHL** salesman for an attractive display rack and Top Oil dispenser today. Get up a strong **BARDAHL** sales display and enjoy extra business you've never counted on before.

You'll be surprised how easily **BARDAHL** is sold—how quickly the profits add up!

BARDAHL: SEATTLE · ST. LOUIS · BOSTON · VANCOUVER · MONTREAL · MEXICO CITY · OSLO · ANTWERP · FLORENCE

Chilton's **MOTOR AGE**, JANUARY, 1953



**DO MORE WORK WITH THE
WORLD'S MOST DEPENDABLE
AUTOMOTIVE TOOLS. CALL
YOUR SKIL JOBBER TODAY
FOR COMPLETE INFORMATION**

"Experience Proves **SKIL** Drill Finest Made.

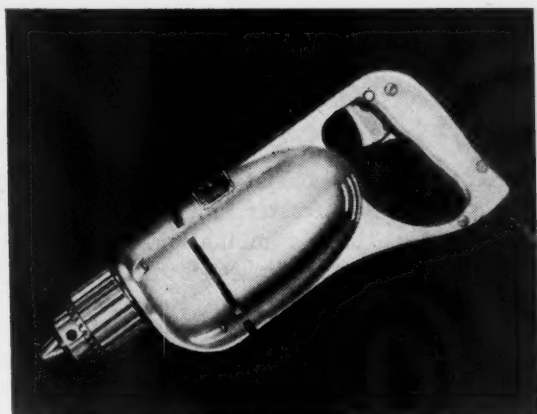
Best in Power, Balance, Compact Size!"

says **E. R. Cosgrove**, lead-man,
mechanical department, **Moda Truck Body Company**,
Los Angeles, California.

The Moda Truck Body Company does repairing, painting and fabrication of custom truck bodies of all types. In the above illustration, E. R. Cosgrove, lead-man, uses the Model 260 SKIL Drill during installation of a custom body.

Praising SKIL power, balance and performance, he says, "You can't 'stick' this SKIL Drill. It has plenty of reserve power and the balance necessary for accurate work. It speeds the job and never tires the operator."

Cosgrove drills in the frame during installation on a stake body truck. "We use this drill all through the mechanical department. Our men wouldn't use any other drill. They know the value of SKIL quality and performance."



SKIL Drill Model 260

Special duty $\frac{3}{8}$ " drill. Capacity in steel: 0" to $\frac{3}{8}$ ". Capacity in hardwood: 0" to $\frac{1}{2}$ ". No-load speed: 750 r.p.m. Full-load speed: 450 r.p.m. Bearings: Ball and self-lubricating bearings on armature shaft; needle roller bearings on intermediate shafts; ball and needle roller bearings on chuck spindle. Length overall: $12\frac{1}{4}$ ". Net weight: 6 $\frac{1}{4}$ lbs.



SKIL

PORTABLE TOOLS



THERE ARE 26 SKIL DRILLS—ONE FOR EVERY NEED!

SKIL Products are made only by SKIL Corporation, formerly SKILSAW, Inc., 5033 Elston Ave., Chicago 30, Ill.

SKIL Factory Branches in 34 Principal Cities

In Canada: Skiltools, Ltd., 3601 Dundas Street West, Toronto 9, Ontario

herent potentialities of the modern high compression, high performance V-8. First of all, the only change made in the basic engine structure is a different piston, longer in keeping with the change to a compression ratio of 8.25 to 1. The camshaft too is new with cams of high lift type to provide greater breathing capacity.

According to the engineers, the combination of a more efficient combustion chamber with 8.25 to 1 compression ratio, and adoption of the 12-volt electrical system has teamed up to produce still better fuel economy despite greatly enhanced performance. Moreover, the octane requirement of the engine is said to be lower than

it was in 1952, thus making the engine less sensitive to changes in fuel quality.

The 12-volt electrical system was introduced primarily to assure adequate firing of the highly compressed mixture under all operating conditions. The starting motor provides more than 50 per cent greater cranking speed at zero temperatures, thus improving starting ability. The 12-volt battery is rated 46 per cent higher in capacity, thus providing the reserve for the greatly increased electrical load of a modern car. In addition, the high capacity generator increases wattage by 33 per cent and, consequently, can carry greater loads with adequate reserve for charging the battery.

The new type distributor is capable of handling extremely high voltages without break-down, provides a strong spark and smooth operation under all weather conditions. Ignition wiring is completely waterproofed.

The Frigidaire air conditioner consists of a condenser, compressor, evaporator, and two blowers for air circulation. The refrigerant is Freon. Both condenser and compressor are mounted under the hood, the compressor being of cylindrical form driven by the fan belt. The blower and evaporator unit is mounted in the luggage compartment, occupying the space on the shelf below the rear package shelf.

A dual heater ventilation system is an innovation for 1953. It consists of two units—a heater-defroster, and an underseat heater. The combination heater-defroster behind the instrument panel provides fresh air, heated or unheated, to the front compartment. The underseat heater delivers all of its output to the rear compartment. The combination unit is the largest ever used by Cadillac.

The Eldorado is a luxurious convertible model mounted on a chassis that is one inch lower than standard with body sheet metal lowered to provide the low sleek profile. The convertible top—available in white or black Orlon—folds automatically into the rear deck compartment and is concealed under a metal cover.



LIFT
"UNDER-CAR"
REPAIR-JOBS TO
THE BEST WORKING
HEIGHT WITH THE
NEW.....HOISTER
(By the Makers of Hypressure Jenny)

SAVE UP TO 50% OF MECHANICS' TIME and WAGES ON UNDER-CAR REPAIR JOBS

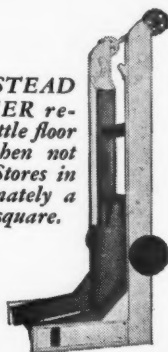
Garage, fleet and service station mechanics work faster and more efficiently when they are not forced to hunch, crouch, or lie on their backs in uncomfortable working postures. With the new, automatically safety-locked, air-operated HOMESTEAD HOISTER, a car or truck can be instantly raised and securely held at the most convenient working height for any "low-down" or under-car service. As a result, repair time and labor costs are reduced and profits increased.

To prove it, we will gladly arrange for a demonstration in your shop. Write today for complete information and address of nearest jobber.



ILLUSTRATED FOLDER AND PRICES ON REQUEST

HOMESTEAD HOISTER requires little floor space when not in use. Stores in approximately a 30-inch square.



HOMESTEAD VALVE MANUFACTURING COMPANY

"Serving Since 1892"

P. O. BOX 95

CORAOPOLIS, PA.

Borg-Warner




ENGINEERING FOR TOMORROW



PRODUCTION FOR TODAY



THESE UNITS FORM BORG-WARNER, Executive Offices, Chicago: ATKINS SAW • BORG & BECK • BORG-WARNER INTERNATIONAL • BORG-WARNER SERVICE PARTS
CALUMET STEEL • CLEVELAND COMMUTATOR • DETROIT GEAR • FRANKLIN STEEL • INGERSOLL PRODUCTS • INGERSOLL STEEL • LONG MANUFACTURING
LONG MANUFACTURING CO., LTD. • MARBON • MARVEL-SCHLEBLER • MECHANICS UNIVERSAL JOINT • MORSE CHAIN • MORSE CHAIN CO., LTD. • NORGE • NORGE HEAT
PESCO PRODUCTS • REFLECTAL • ROCKFORD CLUTCH • SPRING DIVISION • WARNER AUTOMOTIVE PARTS • WARNER GEAR • WARNER GEAR CO., LTD. • WOOSTER DIVISION



the springs of


ETERNAL YOUTH

The automotive industry long ago found what Ponce de Leon sought in vain—"The Fountain of Youth."

Here is an industry that actually grows younger with the years. Those fast, sleek creations of beauty and service rolling off your assembly lines for 1953 excite even greater admiration among the youth of today than was experienced by their fathers and grandfathers.

What is the secret of this eternal youth that keeps a great industry so alert, so dynamic, so increasingly successful? It is the constant realization that tomorrow's cars must be even finer than those of today—that modern automotive engineering knows no limits of achievement.

Just so long as each of us thrills to the task of helping to provide the world with more youthful, more enduring, more efficient transportation, we shall as an industry, drink from the springs of eternal youth.



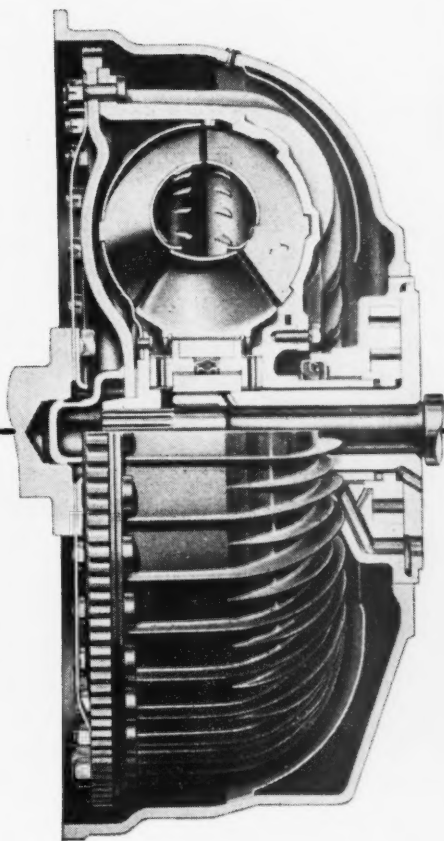
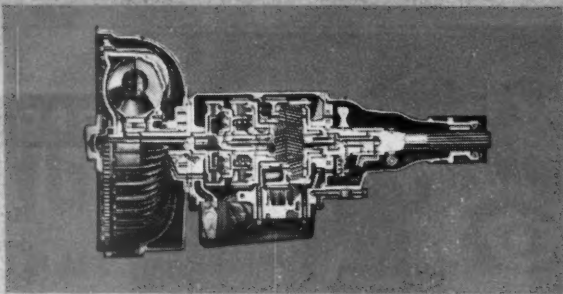
Roy C. Ingersoll

President

BORG-WARNER CORPORATION

the new
BORG & BECK
TORQUE
CONVERTER

used in Fordomatic and Merc-O-Matic transmissions



An air-cooled Torque Converter of unique design with steel blades assembled in die-cast aluminum Impeller whose 68 fins provide swift cooling.

The Turbine is made of steel stampings and the Stator is aluminum. Its One-Way 20 sprag clutch is Borg-Warner's well-proved design.

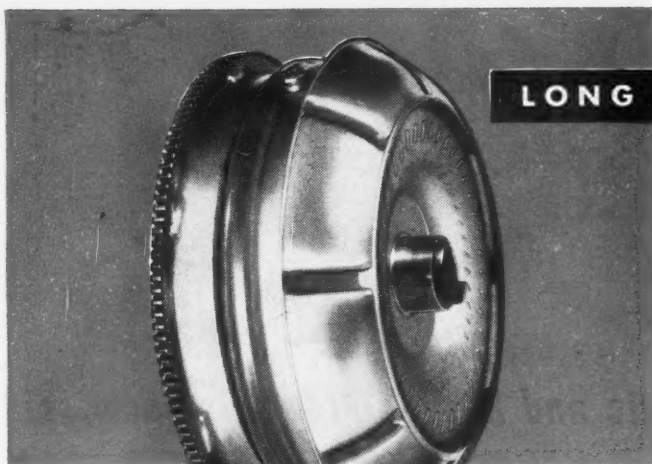
Light in weight, with a torque ratio of 2.1:1, it has excellent efficiency, yet it can be readily disassembled in the field for inspection or repair.

BORG & BECK DIVISION

BORG - WARNER CORPORATION

Chicago 38, Illinois



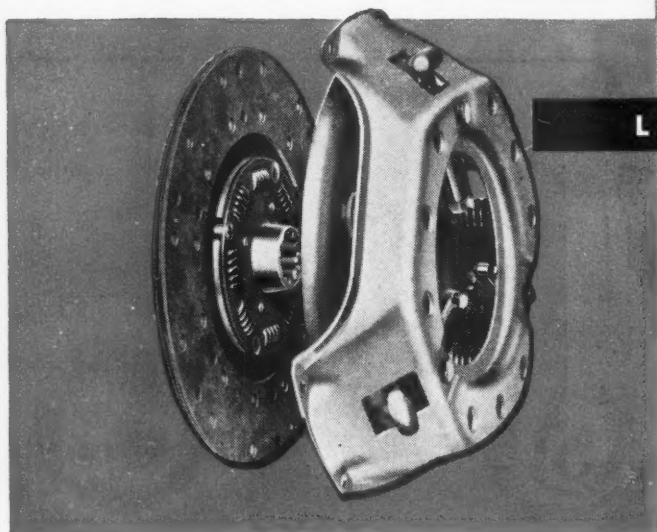
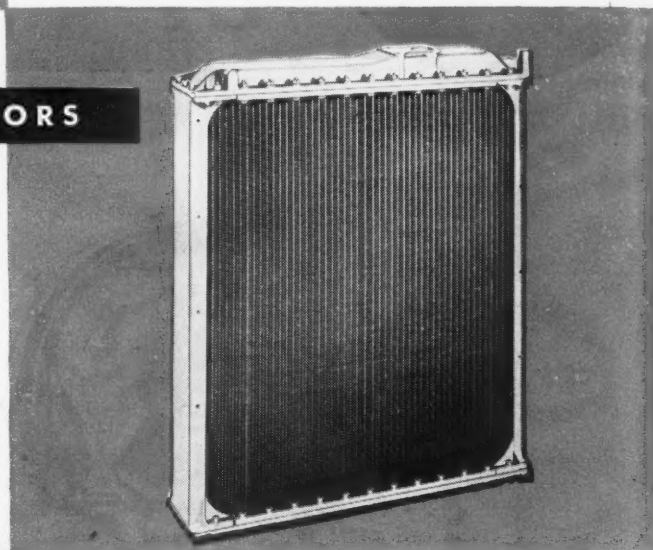


LONG TORQUE CONVERTERS

Here's a package that combines clean design, low-cost production and excellent performance. Long torque converters have velvet-smooth pickup and infinitely variable torque multiplication. Air-cooled . . . simplifies transmission system. Fabricated almost entirely from stampings . . . keeps unit cost low!

LONG RADIATORS

... *THE* name in radiators since 1903! Recognizing Long's superior ability in the field of heat exchange, leading manufacturers have equipped millions of vehicles with Long radiators. This equipment spans the entire range of size and capacity . . . from the smallest passenger car to the heaviest-duty commercial, farm and military vehicles.



LONG CLUTCHES

Rugged and dependable, Long clutches provide effortless shifting, smooth power flow. With Long's semi-centrifugal design, torque capacity increases as speed increases. That means less slippage, less wear, low pedal pressure . . . *longer service!* Since 1922, Long has provided heavy-duty clutching to leading vehicle manufacturers.

LONG MANUFACTURING DIVISION

Borg - Warner Corporation

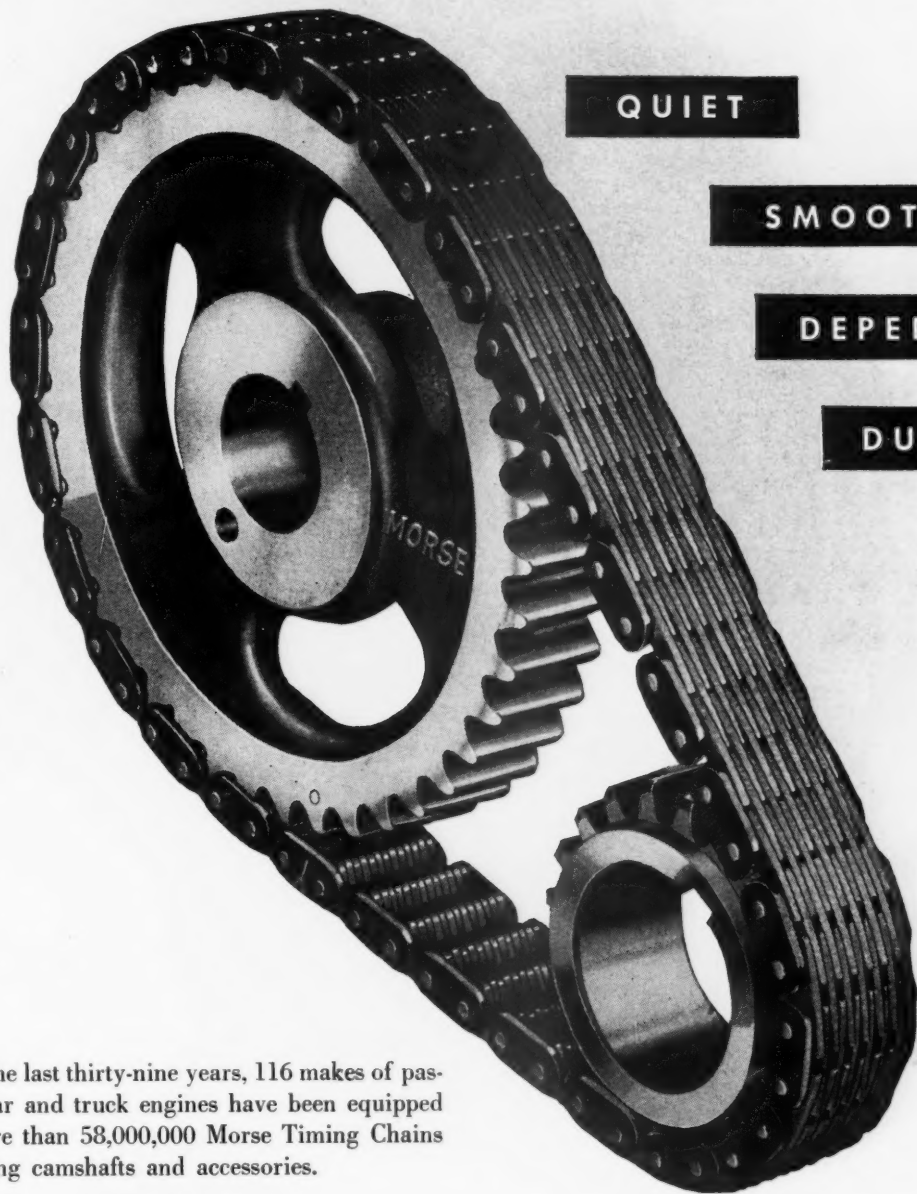
DETROIT 12, and WINDSOR, ONT.



CLUTCHES • RADIATORS • TORQUE CONVERTERS • OIL COOLERS

MORSE TIMING CHAINS

THE ORIGINAL EQUIPMENT LINE . . .



QUIET

SMOOTH

DEPENDABLE

DURABLE

During the last thirty-nine years, 116 makes of passenger car and truck engines have been equipped with more than 58,000,000 Morse Timing Chains for driving camshafts and accessories.

Distributed Through

BORG-WARNER SERVICE PARTS CORP.



**Morflex
Couplings**



**Roller Chain
Couplings**



**Roller Chain
Drives**



**Morflex Radial
Couplings**

MORSE CHAIN COMPANY
DETROIT 10, MICHIGAN

MORSE

**MECHANICAL
POWER TRANSMISSION
PRODUCTS**

FOR MORE THAN **40** YEARS

*a dependable and experienced source
for manufacturer and jobber*



AXLE SHAFTS

TRANSMISSION GEARS

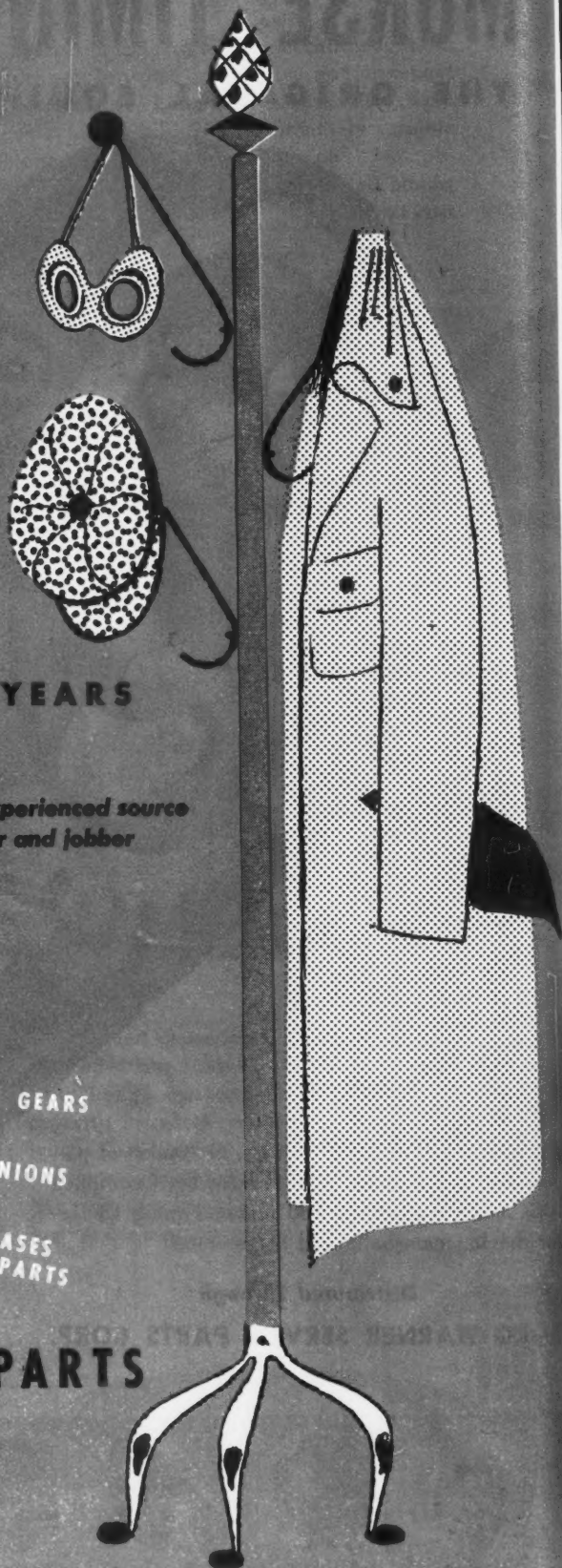
RINGS AND PINIONS

DIFFERENTIAL CASES
AND INTERNAL PARTS

WARNER AUTOMOTIVE PARTS



division of **Borg-Warner Corporation, Auburn, Indiana • Detroit, Michigan**



19 of the 27

DIVISIONS OF

BORG-WARNER

SERVE THE AUTOMOTIVE INDUSTRY

BORG & BECK—clutches and torque converters for passenger cars, trucks and tractors.

CALUMET STEEL—structural tubing and special automobile jack bar steel; small angles for auto seats; merchant bars.

DETROIT GEAR—automatic transmissions for passenger cars; truck and bus transmissions; gear and precision parts for passenger cars, trucks and aircraft.

FRANKLIN STEEL—special automobile jack bar steel; spring steel bumper bar supports; small angles for auto seats; merchant bars.

INGERSOLL PRODUCTS—tapered steel discs for truck wheels; automotive stampings; bumper and stabilizer bars.

INGERSOLL STEEL—automotive and tractor clutch discs; carbon electric steel for tank clutch plates; high carbon and alloy steel sheets; stainless and stainless-clad sheets and armor plate.

LONG MANUFACTURING—clutches and radiators for passenger cars, trucks, buses and tractors; torque converters; oil coolers for the automotive industry.

LONG MANUFACTURING CO., LTD.—(Canada). Clutches and radiators for passenger cars, trucks, buses and tractors; oil coolers for the automotive industry.

MARBON—adhesives for bonding rubber and synthetic rubber to metal and other materials (trade name Ty-Ply).

MARVEL-SCHEBLER PRODUCTS—carburetors for automobiles, trucks, tractors, airplanes, motorcycles, marine and industrial engines; LP-Gas carburetion systems; power brakes.

MECHANICS UNIVERSAL JOINT—universal joints and propeller shafts for passenger cars, trucks, buses, aircraft, farm machinery, tractors, road machinery and mining machinery.

MORSE CHAIN—automotive timing chains and sprockets.

MORSE CHAIN CO., LTD.—(England). Automotive timing chains and sprockets.

PESCO PRODUCTS—superchargers for trucks, buses and heavy duty equipment; hydraulics for lift and dump trucks.

ROCKFORD CLUTCH—truck, tractor and agricultural implement clutches; industrial clutches for construction machinery, oil field machinery, machine tools, etc.; power take-offs for gasoline and diesel engines.

SPRING DIVISION—automobile clutch and valve springs; multi-slide and punch press stampings, plain and heat treated; special clutch plates and parts for automatic transmissions, torque converter parts and sub-assemblies; sprag-type free wheeling clutches; precision flat and Belleville-type springs; small electric motor commutators.

WARNER AUTOMOTIVE PARTS—for replacement purposes—ring gears and pinions; differential cases; differential internal gears and spiders; axle shafts; cast iron parts; transmission gears for passenger cars, trucks and tractors; power take-offs.

WARNER GEAR—automatic transmissions for passenger cars; standard transmissions for cars, trucks, taxicabs, buses and tractors; overdrive units for passenger cars; transfer transmissions for trucks; synchronizer units for passenger cars and trucks; parking brake assemblies.

WARNER GEAR CO., LTD.—(Canada). Synchronizer units.

Two other Borg-Warner Divisions serve in automotive parts distribution: **BORG-WARNER INTERNATIONAL**—export sales of automotive parts. **BORG-WARNER SERVICE PARTS**—U. S. distribution of automotive service parts.

STEPS AND STRIDES ALONG THE WAY

1900—the old time mixing valve was replaced by SCHEBLER carburetors.

1903—radiators made of copper tubing with attached cooling fins introduced by LONG.

1913—the single plate clutch was developed by BORG & BECK, and silent timing chains were introduced by MORSE CHAIN.

1916—universal joints were developed by MECHANICS.

1921—first standard type transmissions were introduced by WARNER GEAR.

1922—double plate clutches were introduced by LONG.

1923—multiple spring clutches were developed by ROCKFORD.

1924—vibration dampening flexible center clutches introduced by BORG & BECK.

1930—transmission synchronizer units produced by WARNER GEAR.

1931—free wheeling was introduced to the industry by WARNER GEAR.

1934—automatic overdrives for transmissions were introduced by WARNER GEAR.

1938—Borglite and Torbond clutch plates were introduced by BORG & BECK, LONG, and ROCKFORD.

1942—simpler, finer, more efficient automatic transmissions were introduced by DETROIT GEAR and WARNER GEAR.

1952—LP-Gas carburetion systems developed by MARVEL-SCHEBLER.



Borg-Warner Corporation

310 South Michigan Avenue • Chicago 4, Illinois

YEAR AFTER YEAR

New Championship Honors for

BLUE CROWN

America's Finest

S P A R K P L U G S



HENRY BANKS, veteran race driver, pilots **BLUE CROWN SPARK PLUG SPECIAL** to 2nd place in 1951 National AAA Championship, to go with his First in 1950! Only driver to qualify and finish in all 14 grueling events — his second full year of racing without a stop for spark plug change!

3 TIME WINNER INDIANAPOLIS 500 MILE CLASSIC

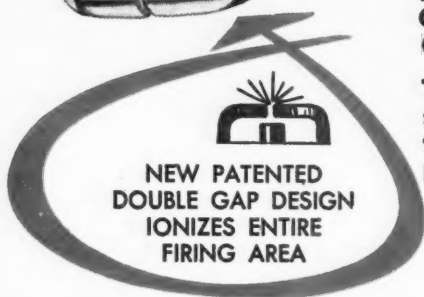
ATTENTION! DEALERS • REPAIRMEN!

DEALERS AND REPAIRMEN EVERYWHERE ARE INSTALLING BLUE CROWN X-CITER DOUBLE ELECTRODE SPARK PLUGS TO OVERCOME FOULING PROBLEMS.

Try **BLUE CROWN** yourself. Install a set in any car giving you spark plug trouble. You too will quickly learn the advantages of these less fouling, easier starting, smoother idling, modern spark plugs.

THE DOUBLE GAP DESIGN DOES MAKE A DIFFERENCE

- **Less Fouling • Easier Starting**
- **Smoother Idling • Saves Gas**



INSTALL BLUE CROWN X-CITERS TODAY!



BLUE CROWN SPARK PLUG CO.

a DIVISION of MOTOR MASTER PRODUCTS CORP.
1800 WINNEMAC AVENUE, CHICAGO 40, ILLINOIS

DOMESTIC SALES

EXPORT SALES

Borg-Warner International Corp.
CHICAGO 4, ILLINOIS U.S.A.

Cable Address "BORINTCO"

must do to install this unit, which comes in kit form:

1. Remove fan, gaining 1 additional hp.
2. Crankshaft pulley is replaced by triple pulleys, two to drive blower and one for pump and generator.
3. Upper radiator tank outlet must be moved to the rear to clear the pulley drive belts, and the hole plugged in the tank.
4. Goose neck on head replaces stock part to match up with outlet.
5. Intake comes off, as new manifold is integral part of blower.
6. Thermostat and bypass pipe come out and holes are plugged.
7. Throttle rod made to connect with larger carbs mounted on new manifold.

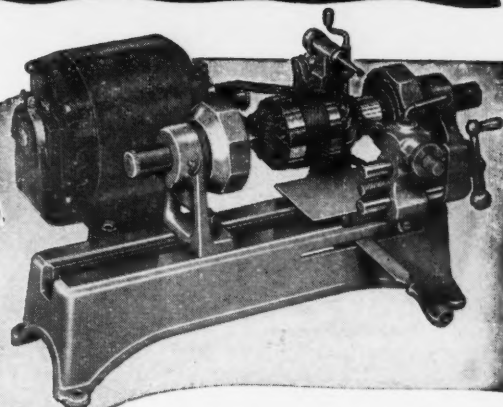
stop cock put in the system, and the mixture set at 60% alcohol and 40% water. Vacuum in the intake draws mixture through the needle valve, but the unit should only be used for road work rather than traffic operation. No particular change in performance was noted, but naturally the engine ran better and smoother.

As for ignition, a Scintilla magnet and colder plugs were installed with a slightly smaller gap than called for by the book. This gave us more reliability at high rpm, yet has caused no trouble in city driving. The performance results were now 102 mph at 6400, with 0 to 60 in 12 flat, which was just about all we could get from this job.

Knowing that in a prolonged race we might encounter high oil
(Continued on page 132)

THIS TRUCUT PACKAGE REALLY PUTS YOU IN BUSINESS!

GET EXTRA PROFITS from Starter-Generator Work!

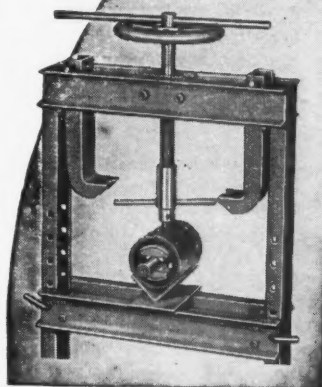


TRUCUT ARMATURE LATHE AND UNDERCUTTER

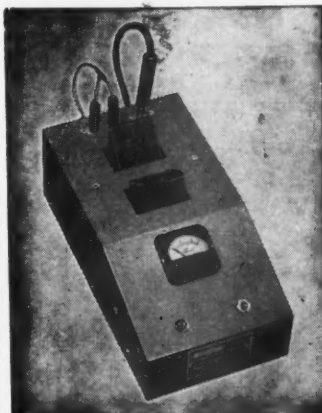
There's plenty of extra profit in starter-generator work . . . if your shop is equipped to handle it!

And you can handle it with these three TRUCUT tools . . . all tried and tested . . . all designed especially for automotive repair jobs! With them, you can machine and undercut commutators perfectly; test for shorts, open circuits, and grounds; make quick, easy work of dismantling and assembling generators. The TRUCUT Press is also useful on dozens of other jobs around your shop.

This TRUCUT package actually pays for itself in an amazingly short time. Enables you to handle work you are now sending out . . . or helps you to do it more quickly and profitably! Write for free details and catalog M-11, today.



TRUCUT SHOP PRESS



TRUCUT ARMATURE TESTER

FRANK N. WOOD CO.
... SINCE 1932
TRUCUT

344 W. Main Street • Waukesha, Wisconsin
Pacific Coast Address
1330 W. Olympic Blvd., Los Angeles 15, Calif.



None of this work is difficult, and now when the car's warmed up it'll do 97 mph, turn 6200, and develop about 87 hp. Acceleration is now 0 to 60 in 12.5 seconds. Power weight ratio has come down to 19:1, which isn't too bad as a Jaguar is 18:1, a Ferrari 12:1—so you're up with the best.

At this point we get to the actual tuning, and we immediately added an alcohol-water injector to offset detonation we got with the blower. The tank was placed in the stock tool box against the fire wall, a

temperatures, a 2 quart oil radiator was added. This unit was part of an aircraft intercooler, and allowed unrestricted flow through 3/8-inch shielded flexible lines. No pressure drop resulted, although we had already removed the full flow oil filter which will give you a pressure drop and which also might fracture at speed. For normal operation, particularly in wi-

ter, the radiator might well be covered.

Additional features included straight pipe with bolted muffler at the rear end which can easily be taken off for competition and replaced for the trip home; government specification instruments to stand the gaff and which you can read more easily, and double spare tires. These give a chance to

change your gear ratio on the road and speed up pit work if you have bad luck with two blowouts during a race.

Basically, the job is finished unless you want to get out the spray gun for the full treatment. This Mk II will now stay in there with most of the modified MG's, on the highway as well as the track.

Further details on modifying the M.G. Mk. II can be obtained by contacting the owner of the car discussed in this article, Lt. Bernard Drebber, Maintenance Officer, Fort Dix, N. J.

a completely NEW BOOSTER CABLE

The first major improvement in booster cable in years!
Greater capacity! Less bulk! Easier to handle! Longer life!

Especially designed FULL FLEXIBLE cable is easier to handle, will not kink! Heavy duty insulation, resistant to oil, grease, and weathering. 412 strands of 30 gauge wire greatly increases the current carrying capacity and cable flexibility. Each cable has a full 8 foot reach ... simplifies hook-ups.



Clips are SOLID COPPER!
Over twice the current carrying capacity of bronze alloy.

Heavy plastic insulated handles, colored for quick current identification.

STOCK NO. 28—DEALER'S PRICE \$11.25 SET OF TWO

Manufactured and guaranteed by the makers of

Silver Beauty BATTERY CHARGERS

Complete line of low-cost, portable units for fast, slow, and trickle charging. Safe, rugged, dependable, completely guaranteed.



Manufacturers of
Electrical Products
and
Power Supply Equipment
Since 1919



Triple-A
SPECIALTY COMPANY
CHICAGO 12, ILLINOIS 2101 WEST WALNUT STREET
PHONE SEeley 3-0465



Purolator Wins Thor Trophy

The Thor Scoreboard trophy, awarded to the exhibitor with the "Best Booth Promotion" at the 1952 Automotive Service Industries show, has been won by Purolator Products, Inc. The eye-catching Purolator exhibit told the oil filter story from its invention to its present highly efficient full-flow design.

One of the most popular features of the prize-winning booth, however, was the exhibition of a 1920 wire-wheeled "Bearcat" Stutz loaned by the James Melton Museum in Norwalk, Conn. Especially equipped with a Purolator oil filter, the old Stutz was placed beside a blowup of a 1952 Purolator national consumer advertisement that showed Mr. Melton driving one of his historic motor cars and testifying: "Young or old . . . any car deserves the best of care."

Protect Yourself!

BUY 'EM BRANDED!



YOUR GRIZZLY DISTRIBUTOR NOW BRANDS EXCHANGE SHOE LININGS BY MAKE AND GRADE

Now, when you buy exchange brake shoes, you can be absolutely sure that they are lined the way you want them! For now your Grizzly Distributor clearly brands each Grizzly-lined exchange shoe not only with the name "Grizzly," but with the exact *grade* of Grizzly lining as well!

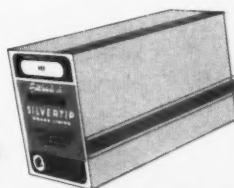
This complete and honest branding of the product is only one of many ways your Grizzly Distributor serves you. He offers you fast, reliable exchange service, and whether you want bonded or riveted lining, he brings you the *finest* obtainable—Grizzly SAFTIBOND-SYNCRO or SAFTIBOND-SILVERTIP for bonding . . . and Grizzly SYNCRO or SILVERTIP drilled and countersunk sets for riveting.

Protect yourself—buy 'em branded from your Grizzly Distributor! Grizzly Manufacturing Company, Paulding, Ohio.

Bear in Mind  . . . Ask for

GRIZZLY BRAKE LINING

NATIONALLY ADVERTISED!...
Grizzly products are advertised in The Saturday Evening Post and Collier's . . . and solidly backed by Grizzly's complete merchandising program.



Most Grizzly Distributors pack branded relined shoe sets in cartons, labeled with FMS Set No. and lining type.



Grizzly Drilled and Countersunk Sets

Silvertip for deluxe or severe service . . . Syncro Sets for standard duty. Individually boxed.

trouble suffered brake failure. Other cars had transmission failure due to the towering mountain runs. Rear axles and engines also gave some trouble.

The technical committee carried out the official inspection on the winning cars and found them to conform to the requisites of the stock class, as outlined in the offi-

cial rules.

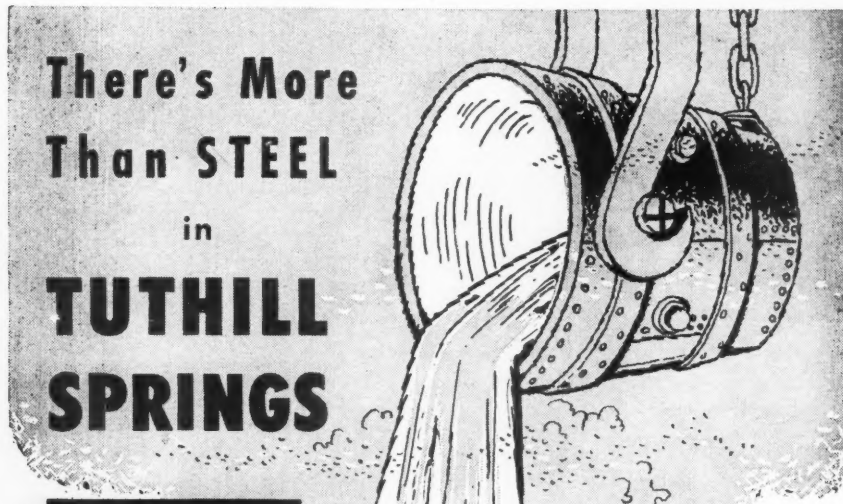
A Mercedes-Benz also took second place in the sports car division with Hermann Lang at the wheel. John Fitch also drove a Mercedes-Benz, setting a record on the final run of 231 miles when he covered the distance in one hour, 41 minutes. He was disqualified, however, for allowing

unauthorized persons to help him correct some mechanical trouble after he had started a run.

The Mercedes-Benz cars used by the Germans are powered by 183 cu. in. six-cylinder engines said to develop 173 hp at 5200 rpm. They are sports models that were tried out for the first time this year in the outstanding races of Europe. They won the Le Mans 24 hour contest, the Grand Prix of Berne and placed second in the Italian Mille Miglia.

A French Gordoni, a light six-cylinder car, was leading the first day through the mountains but the car struck a bridge and the driver was seriously injured. Many believe that the terrific pounding through the mountain beat the Ferraris. The Italian drivers reported serious transmission trouble through the mountains.

Drivers agreed that the Pan-American road race is destined to replace many others as one of the roughest, toughest tests for man and machine.



**There's More
Than STEEL
in
TUTHILL
SPRINGS**

there's
Quality

... the superior quality of finest alloy steel — scientifically formed and heat-treated for greater strength.

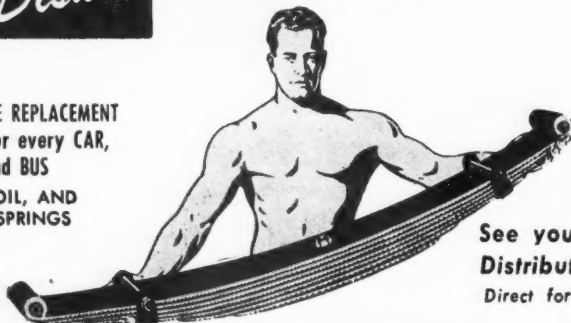
there's
Experience

... the specialized experience and skill from over 70 years of precision spring manufacture.

there's
Moly-Disul

... the new wonder-lubricant (Molybdenum Disulphide) that prevents squeaking and galling — won't wash off.

● COMPLETE REPLACEMENT LINE—for every CAR, TRUCK and BUS
LEAF, COIL, AND HELPER SPRINGS



See your **TUTHILL** Distributor—or Write Direct for Catalog

TUTHILL SPRING CO.
760 WEST POLK STREET • CHICAGO 7, ILLINOIS



"You might call it air sickness—that Rigsby girl gave him the air!"

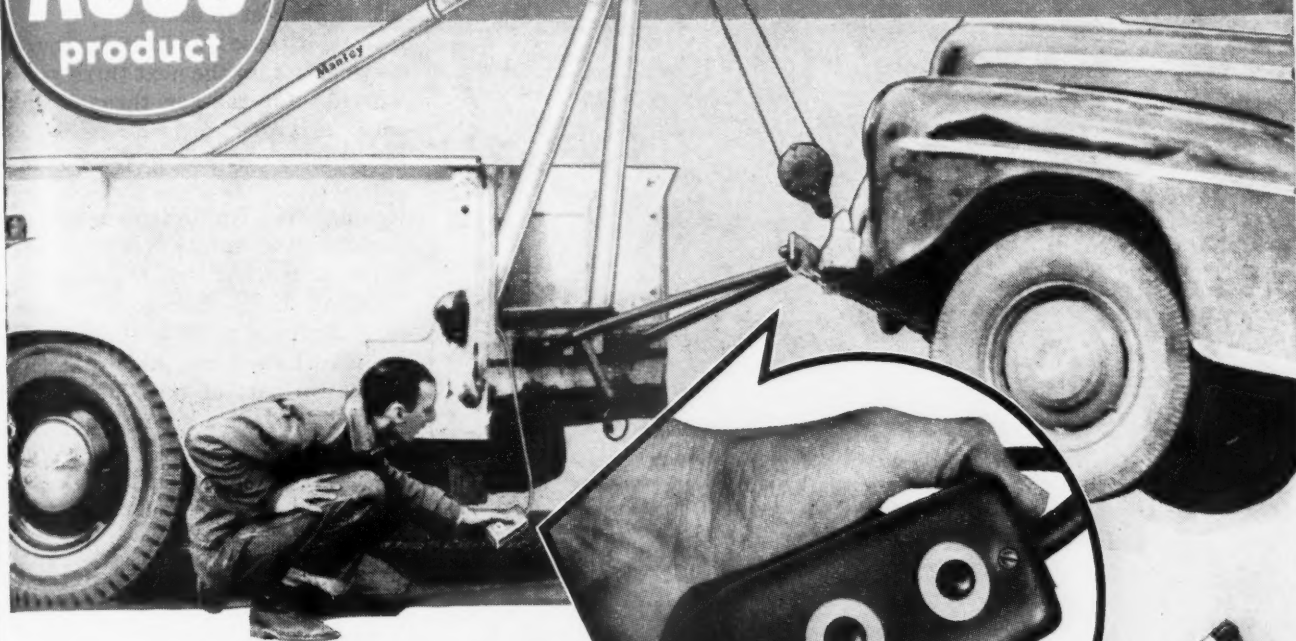
Martin-Senour Observes 75th Anniversary

The Martin-Senour paint company opened a year-long celebration of its 75th anniversary with a Diamond Jubilee dinner in Chicago this month.

Employees joined executives and visitors in observing the 75 years of progress since the founding of the company by W. F. Senour in 1878.

another
ACCO
product

NEW MANLEY PD-3 ELECTRIC POWER DRIVE



• It's new and exclusive with MANLEY—the PD-3 Electric Power Drive for MANLEY WC-3 and WCJ-3 wrecking cranes. It can be bought as a separate unit for installation on any MANLEY WC-3 or WCJ-3 Wrecking Crane in the field . . . or, it can be installed at our factory on new cranes. The PD-3 makes a safe, easy one-man job of tough hoisting operations.

• The PD-3 consists of a sturdy, compact power drive unit with a remote, movable push-button station. Operator has finger-tip control of electrically-operated crane for loads up to 3 tons. He can raise, lower, or hold load—from any spot.

• No power take-off required. $\frac{3}{4}$ horsepower electric motor is powered by truck's 6-volt battery. Crane switch is wired in series with ignition switch to keep motor drive "dead" except when operated by authorized personnel.

• Power drive unit is completely enclosed. All gears run in oil, assuring quiet operation and maximum service life. Entire assembly takes little room. Crane can be folded back to give more hauling space.

• The MANLEY WC-3-PD complete Wrecking Crane with Electric Power Drive mounts on any open truck. It's a money-maker because it saves time and labor on every wrecking job. Send coupon today for additional information.



WC-3-PD
complete

	WC-3-PD	(Jeep) WCJ-3-PD
Width.....	37"	35"
Length.....	80 $\frac{1}{8}$ "	53"
Height.....	54"	54"
Weight.....	355 lbs.	350 lbs.
Clearance, floor space..	37"wide x 62"long	35"wide x 36"long
Cable length.....	35'	35'

MAIL TODAY

MANLEY DIVISION,
AMERICAN CHAIN & CABLE,
YORK, PA.

MA

Please send Bulletin **DH-397** on NEW MANLEY PD-3 Electric Power Drive for WC-3 and WCJ-3 Wrecking Cranes.

Name

Address

Town

State

ACCO

York, Pa., Chicago, New York, Portland, San Francisco, Bridgeport, Conn.



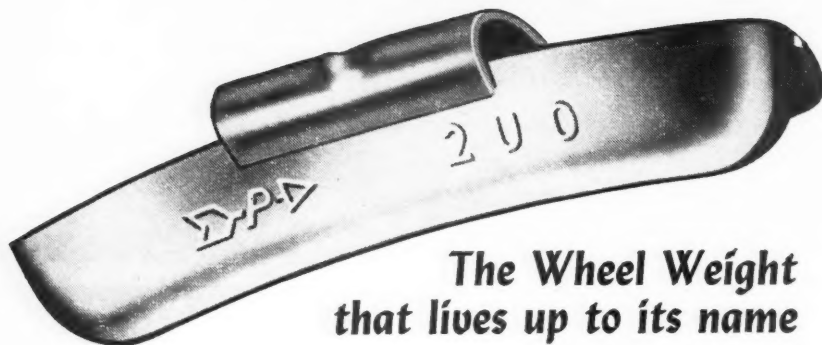
**MANLEY DIVISION
AMERICAN CHAIN & CABLE**

The Best Equipped Shop Gets the Profitable Business



...Where
BALANCE
is needed!

PERFECT
 WHEEL WEIGHTS



**The Wheel Weight
 that lives up to its name**

● "U" TYPE

A favorite in the industry. Fits ALL rims having factory trim rings except late model Cadillacs.

● "C" TYPE

The "C" type weight (new style) in six sizes will give most satisfactory results on passenger cars with "K" or "L" type rims.

● "SPECIAL" TYPE

Made for late model Cadillacs with hub caps covering entire wheel, except 1951 model for which "C" type weight is recommended. 6 sizes.



PERFECT EQUIPMENT CORP.

804 W. Morgan St.

KOKOMO IND.

P.O. Box 706



Manufacturers of Wheel Weights for Trucks and Passenger Cars

Automotive Survey

A nationwide survey is conducted annually by The Crowell-Collier Publishing Co. It predicts trends in the automotive markets. This year's survey reveals certain facts which are of interest to dealers.

47% of those who intend to buy a new car within the next three years will pay for the car through savings. 26% of those who intend to buy a used car plan to pay for the car through savings. Buyers are looking for (in order) economy, performance, safety, comfort, and appearance when they buy a car.

Of all U. S. homes, 74% own cars. Regionally, 64% of homes in the East have a car; 81% of homes in central part of the U. S.; 73% of southern homes, and 86% of western homes. The average car in the U. S. has been driven 43,412 miles and the average car went 9,714 miles in 1951.



"—Stop staring you fool—You've still got 30 miles to go!"

Census of Business

Reports will be collected from about three million separate firms during the government's Census of Business this year. Selected service trades, retail firms, wholesale houses, theaters, and tourist courts are on the list to be contacted. Almost all the information needed is to be furnished by mail on reporting forms which Bureau of the Census believes are largely self-explaining. In general, the Bureau wants facts on sales and receipts, payrolls, employment, and stocks. Special inquiries on sales by commodity lines or products will be included in the survey.

*"My daddy's an
auto repairman, see?"*

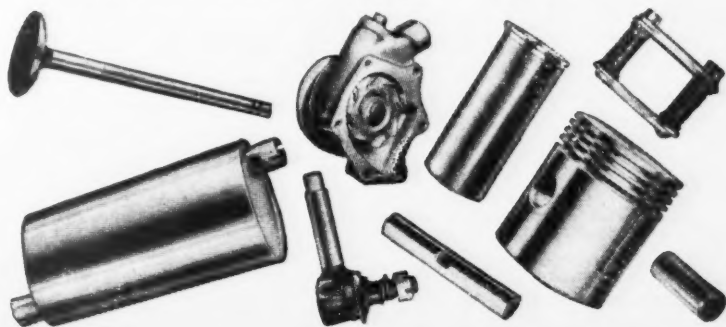


"... and he says that Permitte Replacement Parts are the *best* to use in all makes of cars, trucks and buses.

"Don'cha see why? Permitte Replacement Parts last longer and perform better so Daddy's customers stay happy and always come back again when they need somepin' done!

"What's more, these Permitte Replacement Parts give shops a nice profit margin, and that's important with the price of milk these days!

"If you're a repairman and don't use Permitte Parts, better get with it, Buster! There's a Permitte Jobber near you!"



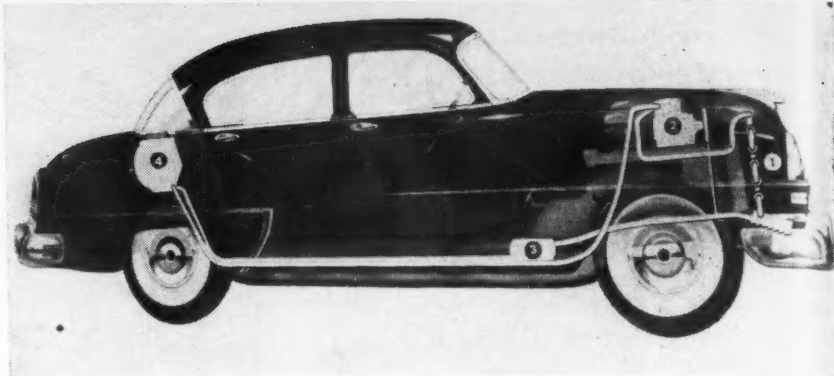
ALUMINUM INDUSTRIES, Inc. • CINCINNATI 25, OHIO

PERMITE Replacement Parts

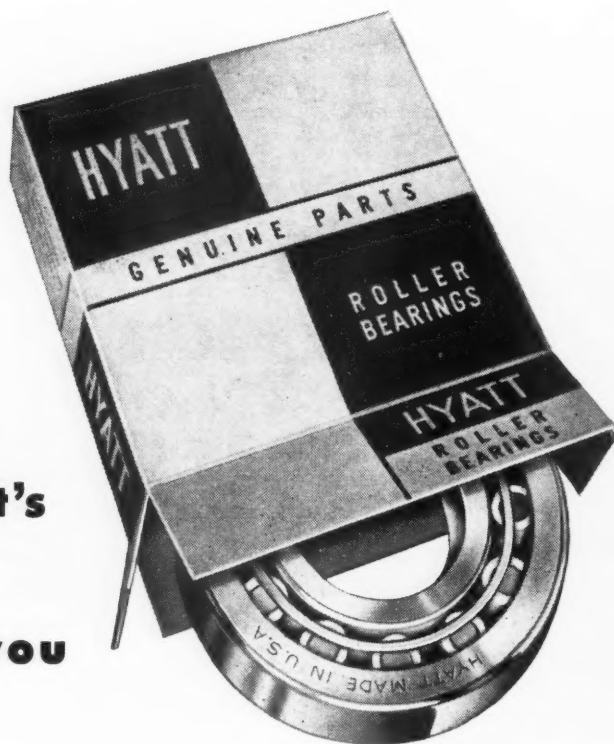
PISTONS • PISTON PINS • VALVES • VALVE GUIDES • VALVE STEM KEYS • VALVE SPRINGS
WATER PUMPS • WATER PUMP PARTS • CYLINDER SLEEVES AND ASSEMBLIES • TIE-ROD ENDS
SPRING SHACKLES • KING BOLT SETS • BUSHINGS • MUFFLERS AND CLAMPS • TAIL PIPES

Chrysler's Air Conditioning

SHOWN here is an artist's rendition of the Chrysler Airtemp automobile air-conditioning unit, mounted in a four-door sedan. The system is comprised of four different assemblies: (1) two heat-dissipating condensers mounted in the front of the car; (2) four-cylinder, V-type belt driven compressor mounted on the right of



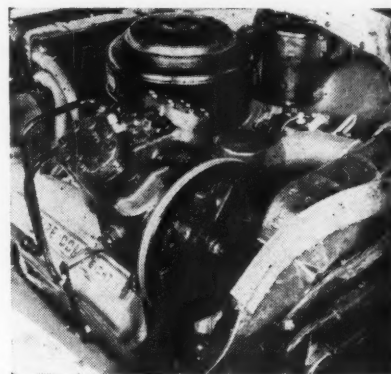
See
what's
in it
for you



You benefit in several ways when you order or install the yellow and blue packaged Hyatts for bearing replacements. Because Hyatts are exact duplicates of original, specified bearings, you can be sure you've got the right size and type . . . you eliminate guesswork. You gain the extra benefit of customer confidence, too, because car, truck and bus operators know that Hyatt is the outstanding bearing in the automobile field. Hyatt Bearings Division, General Motors Corporation, Harrison, N. J., and Detroit, Mich.

HYATT ROLLER BEARINGS
A GENERAL MOTORS PRODUCT  A UNITED MOTORS LINE
DISTRIBUTED BY DEALERS EVERYWHERE

the engine under the hood; (3) Freon receiving tank; (4) evaporator located in the trunk under the rear shelf. The air is cooled in the evaporator which also contains the blower, to circulate the cool air into the passenger compartment from an outlet in the deck behind the rear seat. Operation of the cooler is similar to a refrigerator. The gas is compressed and carried to the condenser coils where the heat is removed. The Freon gas then condenses to a liquid and is conducted through the tubing to the evaporator. The liquid gas is then expanded through the evaporator coils, at which time a large quantity of



View of under-hood installation

heat is absorbed from the air, being drawn by the blowers over the coils. Finally, the gas is returned to the compressor. This unit was tested in the hottest, most humid sections in the South and West last summer and inside car temperatures are reduced from 120 to 85 degrees in less than two minutes. The Chrysler Corporation states that in normal city traffic the air conditioning operates on 2 hp. taken from the engine. The evaporator and cool air discharge unit is located directly under the shelf panel in the trunk compartment.

Electronic Baking

Makes the Difference

in these Cork Gaskets



YOU PAY NOTHING EXTRA FOR THESE BETTER GASKETS

Why risk your profits and reputation with ordinary gaskets. For the same price, you can have modern-made, improved quality Armstrong-Victor cork gaskets. Your Victor Jobber carries factory-fresh stocks — in packaged sets or individual replacement parts — for every make and model.

Victor Mfg. & Gasket Co., P.O. Box 1333, Chicago 90, Ill.

VIC CORKY SAYS: *Only genuine Armstrong-Victor Replacement Gaskets have this exclusive trade-mark — the two notches.*



Here's a difference in gaskets that doesn't show on the surface. It's all in performance . . . in the easier way these gaskets handle . . . seal tighter . . . and stay tight!

You'll see this difference best as you seal up job after job in faster time . . . without a single leaker. You'll know how Electronic Baking improves cork gaskets as you deliver each job, fully confident it's sealed to last.

Electronic Baking is the new process of curing cork composition. It eliminates over-curing or under-curing—the uncertainty of steam processes. It was developed exclusively for Armstrong-Victor gaskets.

Electronic Baking preserves more natural liveliness of raw cork . . . gives gaskets extra strength and sealing power. It assures uniform quality never possible with steam curing.

Armstrong-Victor

CORK COMPOSITION GASKETS • CORK SHEETS

NADA Vice Presidents For 1953

The National Automobile Dealers Association has announced completion of elections of 12 Regional Vice Presidents for 1953. NADA State Directors within each Region elect annually one of the number to serve as Regional Vice Presidents.

The Regional Vice Presidents, plus NADA Officers constitute the Association's Executive Committee.

Newly-elected Regional Vice Presidents will assume the responsibilities of their office at the San Francisco NADA Convention, February 14-18. Regional Vice Presidents who will serve in 1953 are:

Region 1: J. Harrison Cavanaugh, Manchester, New Hampshire, (Rhode Island, Maine, New Hampshire, Mass., Vermont).

Region 2: William L. Mallon, Newark, New Jersey, (New Jersey, Conn., New York, Metropolitan New York).

Region 3: E. A. Sahli, Beaver Falls, Pennsylvania, (Delaware, Maryland, Pennsylvania, West Virginia).

Region 4: James A. Ayers, Chattanooga, Tennessee, (Virginia, Kentucky, North Carolina, Tenn., Dist. of Col.).

Region 5: Ray Brandenburg, Washington Courthouse, Ohio, (Michigan, Met. Detroit, Indiana, Ohio, Met. Cleveland).

Region 6: Frank Collord, Waterloo, Iowa, (Iowa, Illinois, Met. Chicago, Wisconsin).

YOU ASKED LYNCH FOR

A LARGER COMPRESSOR

A NEW STANDARD OF EFFICIENCY

MORE AIR PER DOLLAR

Here is the newest

PAR

7½ H.P.

and

10 H.P. UNIT



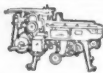
FEATURES

- Optional increment starting
- Centrifugal unloading
- Timken tapered roller bearings
- Counter-weighted crank shaft
- Ring and centrifugal force oiling
- New horizontal check valve
- Simplified system of constant speed unloading
- Simplified method of belt adjustment
- Greater operating efficiency

The new PAR 7½ H.P. and 10 H.P. tank mounted two stage Air Compressor outfits are what you've wanted for years. They're built for rugged service, precision engineered to produce the highest standards of efficiency . . . and they feature many Air Compressor improvements that meet current demands for more efficient air power. Write for complete details, literature on the PAR 7½ H.P. and 10 H.P. Units.



PAR AIR COMPRESSORS



ICE CREAM SANDWICH WRAPPING MACHINES



WRAP-O-MATIC CANDY & COOKIE WRAPPING MACHINES



LYNCH CORPORATION
PAR COMPRESSOR DIVISION
TOLEDO, OHIO
BRANCHES: NEW YORK • CHICAGO
SAN FRANCISCO • ATLANTA



MORPAC PAPER PACKAGING MACHINES



MORPAC BUTTER & OIL PACKAGING MACHINES



GLASS FORMING MACHINES

EXPORT DEPT. • 1902 Jefferson Avenue, Toledo 2, Ohio • Cables: BRADFOSA



"Now will you shut up about my secretary!"

Region 7: Alton M. Costley, East Point, Georgia, (Georgia, Alabama, Florida, Mississippi, S. Carolina).

Region 8: George F. Ziesmer, Mankato, Minnesota, (Minnesota, Nebraska, N. Dakota, S. Dakota).

Region 9: R. D. McKay, Wichita, Kansas, (Oklahoma, Arkansas, Kansas, Missouri).

Region 10: R. S. Abbott, Alexandria, Louisiana, (Louisiana, New Mexico, Texas).

Region 11: Charles C. Freed, Salt Lake City, Utah, (Utah, Colorado, Idaho, Montana, Wyoming).

Region 12: Spencer T. Honig, Los Angeles, California, (No. Calif., Arizona, So. Calif., Nevada, Oregon, Washington).



Everybody Profits

WHEN YOU USE **WEAVER** TWIN POST LIFTS

Yes, *Sir*, Weaver Twin Posts help everybody. The shop owner exacts more profit from each job; the customer gets quicker service and better work; and the mechanic escapes needless drudgery and inconvenience.

With a Weaver Twin Post the mechanic walks right to the job, works in a convenient upright position, has easy access to every under-chassis point. There are no obstructing rails in the way... no "blind spots" to block

his view. All of which promotes a better quality of work, saves valuable time on every job, and keeps the mechanic happy.

And, remember, the Weaver Twin Post is the only automotive type lift that can handle all wheel base lengths without loss of lifting capacity.

Regularly furnished with wheel base adjustment of 88"-148", and can be furnished with extensions to provide wheel base adjustments from 36" minimum to unlimited maximum.

No other lift on the market offers so many advanced features... so much extra convenience and efficiency... so much dependability. Ask your Weaver jobber or write us for complete facts and time study proof of Weaver Twin Post superiority, job-by-job. Ask for bulletin MA-457.



WEAVER MANUFACTURING CO., SPRINGFIELD, ILL., U. S. A.

SERVICE SHOP EQUIPMENT

Complete Weaver line includes—Twin Post Lifts.. Unit Lifts.. Wheel Alignment Equipment.. Headlight Testers.. Brake Testers.. Wheel Balancing Equipment.. Jacks.. Wheel Dollies.. and Air Compressors.

Research-Engineering Institute Announced

Fram Corporation has announced a new division of the company—the Fram Institute of Filter Research-Engineering.

The new division, to be located at Dexter, Michigan, will be under the direction of Dr. William S. James, Vice President and Director of Engineering and Research.

The division has been established to assist in designing new and improved filters to keep pace with the constantly improving engines developed by industry, according to a company announcement.

Fram is now constructing a new engineering and research laboratory adjacent to its unique dust tunnel facilities at Dexter, Michigan. The building will house the Fram

Research - Engineering Institute, and also the corporation's Air Filter Engineering Department.

Racing Attendance Up

AAA sanctioned auto racing, including the Indianapolis 500-mile race and dirt track 100-mile championship classics, drew 1,643,930 people through the turnstiles in 1952, an increase of 17% over the same events in 1951. Biggest increase of attendance at racing events came in the stock car category where 14 championship races drew 205,663 people, an average of 14,690 to each race. Prize money paid to AAA drivers reached nearly a million dollars during 1952. Biggest money winner was Troy Ruttman, winner at Indianapolis and Raleigh, N. C., who banked \$71,000 before being injured August 17 at Cedar Rapids, Iowa, and sidelined for the rest of the season.

Phila. Auto Trade Assn. Honors Past President

Edward J. Ronan, retiring president of the Organization was presented with a gold plaque in recognition of the fact that he is the first man in the entire 50 years of P.A.T.A. to have held all four offices, namely that of Secretary, Treasurer, Vice President and President of the corporation. At a special meeting of the Board of Directors he was unanimously elected to the honorary position of Chairman of the Board. Wm. T. Plachter was also cited for his outstanding work as Chairman of the Show Committee.



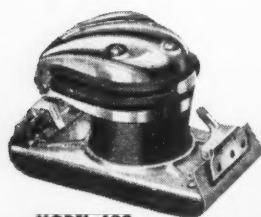
Model 600
\$8250



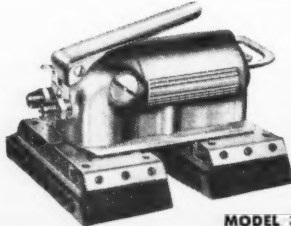
STRAIGHT-LINE ACTION...SINGLE PAD

National's new Model 600 weighs only 5 pounds and operates at 3200 rpm. 5/16" pad stroke and 25 sq. in. of abrasive area assures fast stock removal. For wet sanding a water spray is built into each side of the machine. Either felt or rubber backing pads are available.

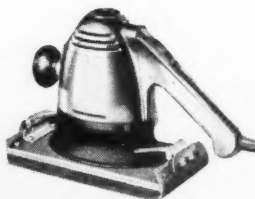
Write for New Catalog on National's Complete Line



MODEL 400



MODEL 300A



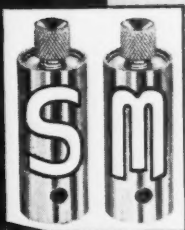
MODEL 500

NATIONAL AIR SANDER, INC., 2820 Auburn St., Rockford, Ill.



The Only Tappet that ASSURES Perfect Valve Timing at ALL Times

NEW



Self-Adjusting Tappets

**AUTOMATIC
TENSION
CONTROL**

**ACTUATING
MECHANISM**

The patented built-in tension control provides the give and take necessary to absorb the variations in the tappet-to-valve system that occur with wear, expansion, and contraction.

- QUIETEST ENGINE PERFORMANCE
- LESS GAS CONSUMPTION
- GREATER POWER AND SPEED
- QUICKEST, EASIEST INSTALLATION

PERFORMANCE THAT PROTECTS YOUR PROFIT AND YOUR REPUTATION

Smooth, long-lasting quiet, but full-power engine performance is the test of a manufacturer's, a dealer's, a mechanic's reputation . . . and reputation is the watchdog of profits!

But, you don't get much customer satisfaction when rattling valves bring cars back again and again for time and dollar consuming govers.

What's the answer? It's the new S-M Self-Adjusting Tappets . . . engineered tappets that automatically shorten or lengthen just the right amount at every stroke to compen-

sate for the minutest changes in the length of the valve system that always occurs with wear, expansion or contraction. And, they're foolproof; they do everything a tappet should . . . and there's no leak down or trouble from sludgy or cold oil, or oil that's too heavy or too thin.

S-M Self-Adjusting Tappets are available for a wide range of car and truck models. Remember, it's your only way to assure perfect valve timing, at all times, under all operating conditions!

SKINNER-MOSER SALES DUNEDIN, FLORIDA

**Send today for FREE
folder describing these
revolutionary new S-M
Self-Adjusting Tappets.**

SKINNER-MOSER SALES
Dunedin, Florida

IMA

- () Send information at once.
() Ask a representative to call . . . RUSH.

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

He Got the Job

A. P. Ferguson and E. L. Potter have been appointed to the newly created positions of assistant managers of sales of Houdaille-Hershey Corporation.

Ferguson has been associated with Houdaille in a sales engineering capacity for 22 years. He will be in charge of automotive sales. Potter, who has had 12 years of

experience with the company in sales engineering, will be in charge of sales in non-automotive fields.

James W. Wilcock has been appointed assistant general sales manager for the McKay Company. Prior to his present appointment Mr. Wilcock handled the sale of all McKay products around Detroit.

Morgan J. (Mike) O'Connor (left) has been appointed as director of public relations for Nash Motors Division. O'Connor former-



ly was director of public relations and advertising for the United Foundation Torch Drive in Detroit. John R. Pichurski (right) has been named assistant public relations director, Nash Motors Division.

George S. Fabel, formerly vice-president, has been elected president of the Thermoid Company. He succeeds Fred E. Schluter, who remains on the Board of Directors.

Appointment of five new regional business managers for Dodge Division of Chrysler Corporation has been announced. The men and their regions are: John C. O'Connor, Memphis; William J. Barker, Atlanta; John A. Peter, St. Louis; Edgar T. Keane, Cleveland; and John F. Walters, Pittsburgh.

R. Dean Kirk has been named general production manager of AC Spark Plug Division. In his new



capacity Mr. Kirk will have charge of purchasing, production control, (Continued on page 147)

**NEW, EFFICIENT WAY TO HANDLE PAINT...
MIX, POUR, KEEP in the Original Container with
MIX N' POUR Can Topper**

...by **FOSTORIA** PRESSED STEEL

BEADED EDGE

FLEXIBLE, LEAKPROOF SEAL

COLOR MIXING NOW MADE EASY!

No need hunting for a clean can to mix paint. MIX N' POUR adds 1/3 additional capacity to gallon cans. Fits all standard cans, is quickly removable and reusable as a painter's working tool. Seamless steel ... leakproof gasket impervious to lacquer thinners, reducers, etc. MIX N' POUR is the convenient modern way to handle paint.

FOSTORIA PRESSED STEEL

FOSTORIA PRESSED STEEL CORPORATION
Fostoria, Ohio

**DID YOU SEE THE
NEW POPULAR PRICED
MOBIL-DRY JR.
TRAVELING OVEN AT
THE ASI SHOW?**

Dept. 61 Fostoria Pressed Steel Corporation,
Fostoria, Ohio

Gentlemen: Please send me full details on

☐ MIX N' POUR Can Topper

☐ Mobil-Dry Jr. Traveling Oven

NAME _____

FIRM NAME _____

STREET ADDRESS _____

CITY _____ STATE _____

FULLBACKS DON'T ALWAYS MAKE GOOD UNDERTAKERS

Pin boy, line plunger, undertaker's aide, and frustrated soldier . . . that was

Jerry at 18. Then a belt-driven motorcycle straightened out his muddled career.

Reading time: 1 minute, 46 seconds

IT WAS a rough decision. The undertaker I had been working for offered to take me into the business. I was 18 and it was the first time anybody had offered me an interesting career. But I turned him down. I just didn't look the part. My build is for fullbacks, not undertakers."

Jerry's outsized dimensions lend authority to his statement. At 50 he still looks rugged enough to bend an opposing line. His 220 pounds ride compactly on his 6-foot-plus frame. Add his warm, friendly voice to this imposing stature and his success as a Chrysler-Plymouth Dealer is easily understood.

"Every man," he continued, "has his day of decision. Mine was the day I mentioned—the day I decided against becoming an undertaker. Up to then, I'd been floating. After grammar school, I was a pin boy in a bowling alley. Then there was a short career as a fullback on a semi-pro football team. Finally, I tried to enlist but the army discovered I was under age. Not a very promising start."

Then a belt-driven motorcycle entered Jerry's life.



"That was one *balky* motorcycle," he chuckled, "and I didn't know a thing about mechanics. So I got a job in a garage to learn. The building was a combination garage and mortuary. That's how I met my undertaker friend."

In 1920 Jerry's career gathered speed and purpose. He became a mechanic in a dealer's garage. One day he sold a used car, and his interest took a new turn. He began selling used cars on his own.

"Wonderful schooling," he recalled. "It was then I learned to *demonstrate* new wrinkles instead of just talking about them. Take power steering. Before you tell a customer about it, let him try it. Then he knows what you're talking about."

Soon Jerry was service manager, a job he held until the business folded—like many others—in the depression. For Jerry it was a golden opportunity. With \$4000, he and his brother-in-law bought the shop as a garage.



"Then," he declared, "I learned something about problems of management. Many Saturday nights, we went home with empty pockets. But not once did our men get less than full checks. It paid off in their loyalty."

Within a year, the partners were operating as a dealership. By 1939, they had an opportunity to become Chrysler-Plymouth dealers.

"We knew those two cars were best in their fields," Jerry said. "And confidence in your product is the most important thing in selling. We took the dealership without a minute's hesitation."

"Our location," Jerry reported, "is a big factor. We've been here for 33 years. And being in automobile row is an advantage. People come to inspect one make, and stay to look in windows at others. We know if we can get them to look, we can sell them. Comparison does it."

"Another thing about our location," Jerry smiled. "It's only a few blocks from that undertaking parlor. Every time I pass it, I wonder what would have happened if I had accepted that tempting offer . . ."



Write for our free booklet of true stories about enterprising men. Chrysler Corporation, Highland Park 3, Michigan.



CHRYSLER CORPORATION

PLYMOUTH • DODGE • DE SOTO • CHRYSLER • DODGE "JOB-RATED" TRUCKS
FINE CARS OF GREAT VALUE

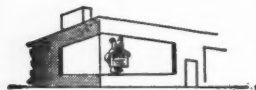
Wherever you put them...
BEAR SIGNS
 build your business!



AT THE ENTRANCE



ON THE WALL



IN THE WINDOW



AT SERVICE STALLS



ON BILLBOARDS



IN ADVERTISEMENTS



ON THE HIGHWAY



IN CLASSIFIED
 TELEPHONE DIRECTORIES



BEAR
SAFETY SERVICE

WHEEL ALINEMENT & BALANCING
 FRAME & AXLE STRAIGHTENING
 HEADLIGHT & BRAKE TESTING

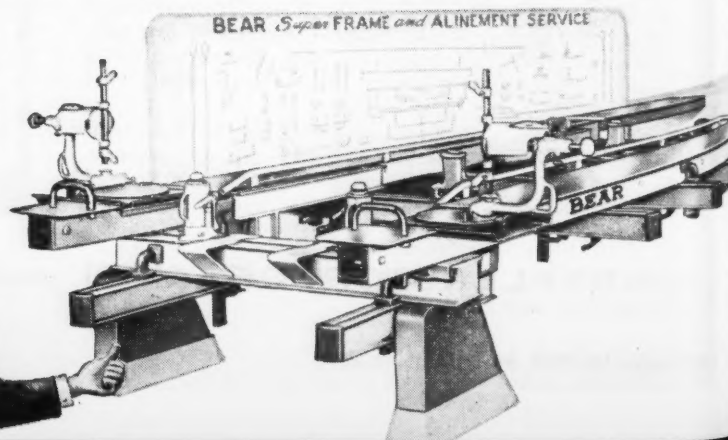
"MOST EFFECTIVE BUSINESS BUILDERS
 we've ever used" ... so say the thousands of
 shops displaying the "Bear" Sign. Ask
 any "Bear" operator and he will tell you:
 "THE MORE 'BEAR' SIGNS YOU USE,
 THE MORE MONEY YOU MAKE!"

the **MORE "BEAR"** you have
 the **MORE MONEY** you make

Step into BIG PROFIT Wheel Alinement, Frame and Axle Straightening
 with MONEY-MAKING "BEAR" Standard and Heavy-Duty Services

THIS is a booming business! Even bigger business is sure to come! Because during the next few years CAR, TRUCK, TRACTOR and TRAILER REGISTRATIONS ARE SURE TO INCREASE! No need to let this business pass you by! The "BEAR" PLAN makes it easy for you to get just the equipment you need to get started or to expand. There is a "Service" for every shop—standard and heavy-duty models for handling a complete range of motor vehicles, from the smallest to the largest. You make EXTRA PROFITS on every job with "Bear." With "Bear" you do the job

right in less time. You can hydraulically straighten bent parts cold, making them stronger than new! Get full details on all "Bear" Equipment, including the 197-84 "Service" illustrated here. See your "BEAR" JOBBER TODAY. Or write for catalog to BEAR MFG. CO., DEPT. M-1, ROCK ISLAND, ILLINOIS.



traffic and shipping. In addition, he will have general supervision of the AC Contract Section.



William L. Knoyer has been appointed president of the Service Supply Company of Denver. Until

his recent appointment, Knoyer served as sales representative of the firm for eleven years. He has spent over twenty-five years in the automotive business, starting as a jobber salesman in 1927.

Herbert P. Bagley, president of White & Bagley Company, died recently at the age of 85. The founder of the widely known oil and lubricant manufacturing firm, Mr. Bagley had made numerous important contributions to the automotive industry. He was a 33rd degree Mason.

William E. Judd, general sales manager of the South Wind heating equipment division, has been appointed assistant to **James S. Knowlson**, president and board chairman of Stewart-Warner Corporation.

Named to the newly created post of sales manager-cars for Dodge Div., Chrysler Corp., is **L. F. Desmond**, formerly director of advertising and merchandising. Selected for the other major position of sales manager-trucks is **William S. Woolsey**, formerly director of truck sales.

William C. Avery has been named Field Engineer for the Hunter Manufacturing Co. in 11 western states. For the past several years Avery has been sales engineer for Hunter in the Midwest with headquarters in Chicago.

Wally J. Baye has been promoted to automotive customer service manager of the automotive divi-

sion of the Martin-Senour Paint Company. Baye has been office manager of the automotive division for the past 10 years, and had previously spent 12 years in the company's accounting department.

Alexander J. Bette, staff manager of industrial frictions of the Johns - Manville Corporation, has

been appointed product manager for frictions materials.

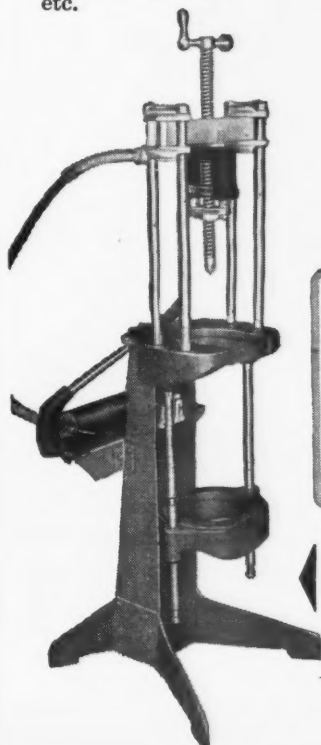
Richard L. (Ollie) Olson and **Kenneth M. (Ken) Johnston** have joined the Arco Company's sales force. Olson will make his headquarters in Minneapolis. His service territory includes all of Minnesota, the Dakotas and parts of Wisconsin.

Johnston, who will operate out of Denver, Colo., will serve Colorado, Wyoming and Montana.



Tough Jobs! They're a cinch with the CENTER-HOLE HYDRAULIC PULLER

The OTC Power-Twin Hydraulic Puller is an ideal, economical garage tool, compact, powerful—handles 95% of the pulling and installing operations in the average shop. The Power-Twin may be detached from press—used as portable ram—speeds up pulling and installing jobs 75%, eliminates torque—remote control provides safety. A complete range and variety of Pullers, Adapters and Attachments are available to pull or install sleeves bearings, races, gears, pinions, couplings, etc.



17½, 30
and 50
TON
SIZES

Famous OTC CENTER HOLE Ram permits fast, easy adjustment to the work and interchange from push-puller to sleeve puller to bench press.

Pull or install cylinder sleeves with the OTC Power-Twin Hydraulic Puller in minutes instead of hours.

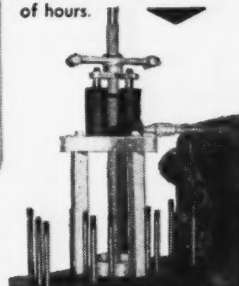
COMPACT, POWERFUL

	17½	30	50
Height	5½"	6¾"	9¾"
Width	5½"	7"	8¾"
Thickness	2"	3"	3½"
Ram Travel	2"	2½"	3"
Center Hole	1"-8	1¼"-7	1½"-6
Weight	10 lbs.	23 lbs.	40 lbs.

Amazingly efficient combination of Portable Pedestal Press and 17½ ton Power-Twin Hydraulic Puller. Move it where you want it . . . it's portable.

See your OTC jobber or write to us . . . today!

OWATONNA TOOL COMPANY
321 CEDAR STREET
OWATONNA, MINNESOTA



NO ADAPTORS NO FUMBLING

...just snap
them on



YOU make profits *fast* with Trico's new Soft-Rubber Wiper Blades.

You'll pick the right blade *quick* from Trico's handsome metal Sales Cabinet. *No fumbling on the shelf!*

And you can snap them on **ALL FOUR** types of wiper arms instantly *without*

fumbling, without fiddling around with a bewildering assortment of adaptors.

The Cabinet is yours *without extra charge* when your Jobber sets you up with a modest, balanced stock—and you'll be surprised at how small an inventory will service **ALL** cars, old and new! Phone him **NOW!**



HOW TO SELL and INSTALL Wiper Blades—an "eye-opening" full-color sound-slide film for sales meetings. Write Trico—or ask your Jobber to arrange a showing of "Seeing in the Rain" for you.

FREE—This handy Slide Chart instantly tells what blade to pick. Write Trico or phone your Jobber for one.

Triple Action
—for flat shields

Trico Rainbow
—for curved shields

Windshield Wipers
Trico Products Corporation, Buffalo 3, N. Y.

Calendar of Coming Events Dealer Meetings

Feb. 14-18 — National Automobile Dealers Assn., San Francisco

Feb. 28-Mar. 7 — Motor Car Dealers of Greater Kansas City, Kansas City, Mo.

Mar. 9-10 — Louisiana Automobile Dealers Assn., Jung Hotel, New Orleans

Mar. 21-29 — Motor Car Dealers Assn. of San Francisco, San Francisco

Mar. 23-24 — Iowa Automobile Dealers Assn., Hotel Fort Des Moines, Des Moines, Iowa

Mar. 24-Apr. 1 — Fresno Motor Car Dealers Assn., Fresno, Calif.

Sept. 21-22 — Minnesota Automobile Dealers Assn., Hotel St. Paul, St. Paul

Sept. 27-28 — Georgia Automobile Dealers Assn., Atlanta Biltmore Hotel, Atlanta

Automobile Shows

Jan. 24-31 — Grand Rapids Automobile Show, Civic Auditorium, Grand Rapids, Michigan

Jan. 25-31 — Syracuse Automobile Dealers Assn., War Memorial Bldg., Syracuse

Jan. 30-Feb. 8 — Los Angeles International Automobile Show, Pan Pacific Auditorium, Los Angeles

Jan. 31-Feb. 7 — 50th Anniversary Show, Buffalo Automobile Dealers Assn., Masten Armory, Buffalo

Jan. 31-Feb. 8 — Greater St. Louis Automotive Assn., Keil Auditorium, St. Louis

Feb. 7-13 — Milwaukee County Auto Dealers Assn., Auditorium Bldg., Milwaukee

Feb. 18-22 — Fort Wayne Auto Trade Assn., War Memorial Coliseum, Fort Wayne, Ind.

Feb. 21-Mar. 1 — Washington Automotive Trade Assn., Washington, D. C.

Feb. 21-Mar. 1 — 1953 World Motor Sports Show, Madison Square Garden, New York

Feb. 28-Mar. 7 — Johnstown Automobile Dealers Assn., Cambria County War Memorial, Johnstown, Pa.

Mar. 7-15 — Seattle Automobile Dealers Assn., Seattle Armory, Seattle

Mar. 14-22 — Chicago Automobile Show, International Amphitheatre, Chicago

Apr. 4-13 — International (Second Annual) Motor Sports Show, Grand Central Palace, New York



Chilton's MOTOR AGE, JANUARY, 1953



Do You Know the Real Facts about BRAKE FLUIDS?

Your customers' lives may depend on the quality of the Brake Fluid you use. Many Brake Fluids are DANGEROUSLY under the safety standards set up by S A E specifications.

It is of record that your big cost is labor . . . *not the cost of Brake Fluid*. Therefore, why not make sure that you provide your customers with the CORRECT Brake Fluid—which will give them SURE brakes . . . perhaps save their lives!

BOWES BRAKE FLUID is guaranteed to meet or exceed S A E Specifications

When you use Bowes Brake Fluid you are assured of these features . . .

**FREEZING POINT NOT TOO HIGH
BOILING POINT NOT TOO LOW
PERFECT WATER ABSORPTION
RUST PROTECTION
LUBRICATING QUALITIES
NO DISTORTION OF RUBBER PARTS
NO GUMS IN SYSTEM**

No car manufacturer has ever used or recommended a brake fluid not meeting S A E specifications. You can be sure of providing genuine safety if you use BOWES Brake Fluid . . . *guaranteed* to meet or exceed S A E specifications.

**BUILD YOUR BUSINESS,
MAKE MORE PROFIT
WITH—**



Available in "Heavy Duty"
and "Moderate" types

**BOWES
SEAL FAST
BRAKE FLUID**

BOWES "SEAL FAST" CORPORATION, INDIANAPOLIS 7, INDIANA

49. Oil Merchandiser

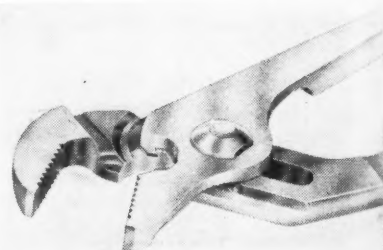
Grieve-Hendry Co.: The oil merchandiser produced by Grieve-Hendry Company, Inc., is known as the "Shur OC200." It is an oil changer, checker, flusher. With one control the serviceman can show the customer all the oil removed from the crankcase, and return it to the crankcase if neces-

sary. It measures the quantity of oil removed and shows the quality of the oil. It can flush the crankcase and empty its own waste tank automatically. The firm points out that the secret of selling oil is to remove "quickly and painlessly" without disturbing the motor. The oil sales can be increased because the motorists see

for himself exactly how much oil was removed and can examine the condition of the oil. Instead of selling one or two quarts, the motorist sells himself on a complete oil change.

50. New Plier Design

Champion DeArment Tool Company: The Channellock Plier has been redesigned with many new features, including an undercut tongue and groove that gives the tool positive adjustment. The manufacturer states that the triangu-



lar shaped tongue and grooves provides strength far in excess of requirements. In addition, a forged rib on the tension edge of the Channellock joint provides the strength required for the toughest jobs. The jaws have been redesigned for maximum utility in gripping small objects.

51. Filter Catalog

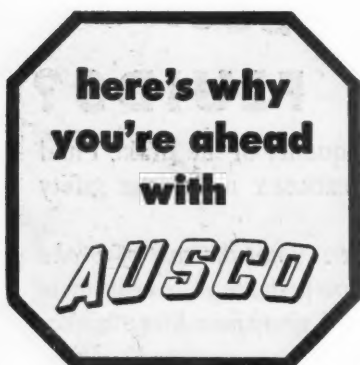
DeLuxe Products Corp.: A new 52-page DeLuxe catalog featuring heavy duty service oil filters and cartridges, is said also to be a "short course" on the essentials of heavy duty oil filtration. The catalog contains illustrations of DeLuxe heavy duty service oil filters, replacement cartridges, and removable "Sedisumps" for all cars. There is a section on "Cartridge Diagnosis" which illustrates typical used cartridges, points out symptoms shown by each and the diagnosis that reveals the specific engine condition which is faulty.

52. Oil Additive

Stewart-Warner Corp.: Alemite CD-2 concentrate is a new automotive chemical product which is claimed to make all internal combustion engines perform more smoothly, last longer and run more economically. It is designed to assure free active valve stems, hy-

(Continued on page 152)

for easier service work ...bigger re-sale profits!



COMPETITIVELY PRICED!

Investigate Ausco's new lower prices, that give you an edge on competition.

HIGHEST QUALITY!

Every Ausco Jack is made by Ausco... from castings to finely-machined hydraulic pistons... in the most modern jack plants.

COMPLETE LINE!

Hydraulic or mechanical... ¼ to 20-ton capacities... for service use or re-sale.

PROMPT DELIVERY SCHEDULES!



Garage Horse—ratchet type... 2 and 5-ton models.

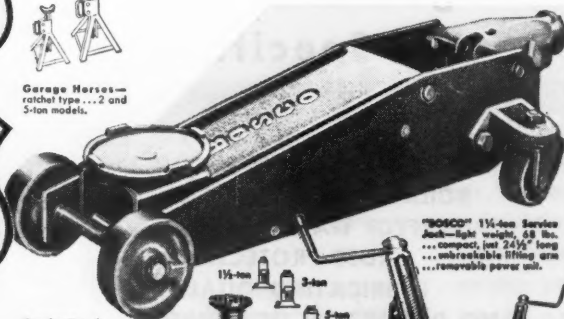


Complete line of Mechanical Screw Jacks for truck use—illustrated, 1½-ton model with large sled-type base and fully-enclosed mechanism. 6 other models also available.



Friction Bumper Jack—Automatic full-control release... one-piece malleable iron body and load rest. Cap. 1 ton; lift 27".

Ratchet Bumper Jacks—Raises on both up and down strokes... broad base for easier placement. Cap. ¾ and 1 ton; lift 32".



"BOSCO" 1½-ton Service Jack—light weight, 48 lbs. ... compact, just 24½" long ... unbreakable lifting arm ... removable power unit.



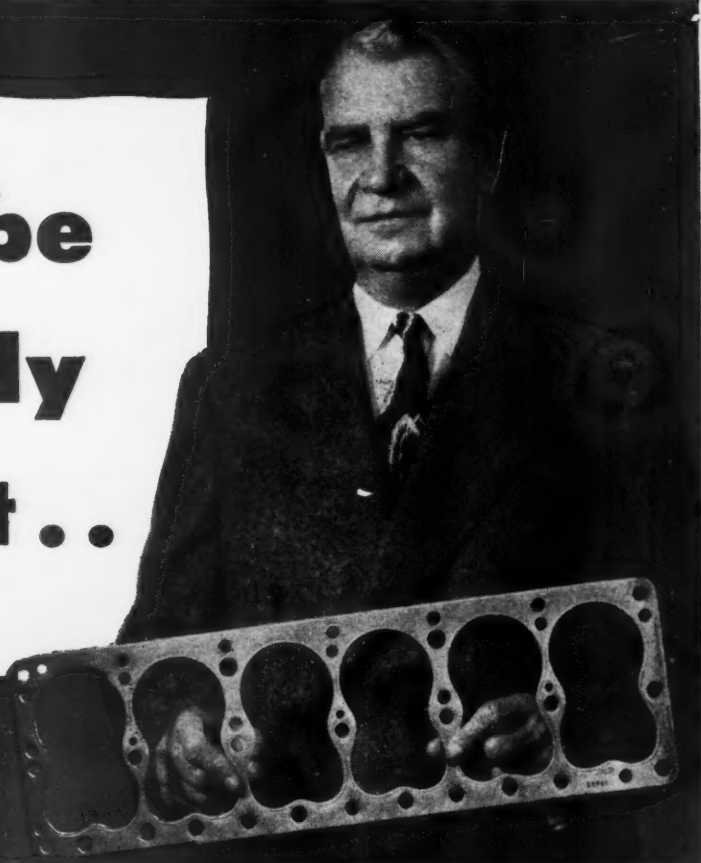
Hydraulic Auto Jacks lifting action starts instantly with first stroke... straight-line oil flow eliminates dirt-trapping pockets... easier, smoother lowering at any speed... load under complete control at all times.

SAF-LIFT Bumper Jacks—car owner and service models. Revolutionary bipod construction... minimum of moving parts... low load rest... high lifting range (24" & 24½").

Y-123

AUTO SPECIALTIES MFG. CO., ST. JOSEPH, MICH.

**You can be
completely
confident..**



with...

FITZGERALD

Metallic Aluminum-
Fused-Oxide
Steel Asbestos

GASKETS

says P. J. Fitzgerald

New no longer, but *performance-proven*, Fitzgerald Metallic Aluminum-Fused-Oxide Steel Asbestos Gaskets have won world-wide acceptance for their ability to withstand the extreme pressures and heat of modern high compression engines under all sorts of conditions for several years now.

They're readily available everywhere . . . from leading jobbers throughout the United States and Canada and are exported to the rest of the world exclusively by the nation's largest automobile manufacturer.

When you install Fitzgeralds . . . as replacements or as original equipment . . . you can be sure of a lasting, perfect seal.

President

THE FITZGERALD MANUFACTURING COMPANY
Torrington, Connecticut

CANADIAN FITZGERALD, LTD.
TORONTO, CANADA

BRANCH AND WAREHOUSE
LOS ANGELES, CALIFORNIA

SECTION A—A
.002"-.003" THICK
FUSED ALUMINUM OXIDE

SECTION A—A

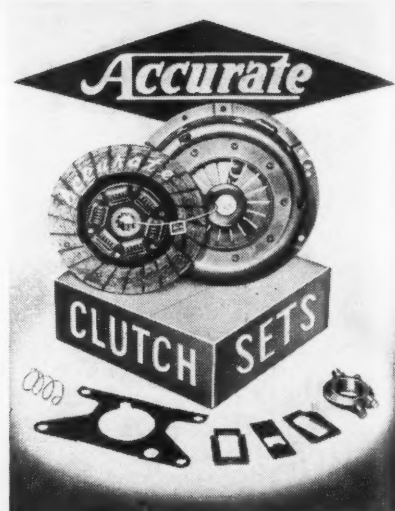
GREASE RETAINERS — CORK GASKETS — FITZ-RITE
TREATED FIBER GASKETS FOR OIL, GASOLINE
AND WATER CONNECTIONS
COMPLETE SETS FOR MOTOR REBUILDERS

FITZGERALD
Gaskets
SINCE 1906

draulic lifters, rigs, etc., in addition to thoroughly clean the engine of destructive foreign matter and by-products of combustion. The company states that CD-2 does not disappear on or fade in a few miles of driving and that it does not dilute or thin the motor oil to which it is added, but remains active until the oil is changed.

53. Clutch Sets

Accurate Parts Mfg. Co.: A new improved line of complete clutch sets is now available from Accurate Parts Mfg. Company. In this line every Accurate Clutch Set is a complete unit consisting of a factory rebuilt clutch assembly that has been balanced within required tolerances and a new Pow-



er-Flex clutch plate that has been matched, tested for adequate release and smooth engagement with the particular assembly to which it is wired and sealed. In addition to these two major parts, every auxiliary part needed to do a good clutch job is in this one package.

54. Plug Socket

Herbrand Div., Bingham-Herbrand Corp.: A new socket for removing spark plugs on the new high compression engines has been introduced by Herbrand Tools. It is said to have an extra thin tapered nose for maximum clearance in close quarters. The socket's half-inch drive fits standard handles. The company claims that the six-point opening and internal shoulder of their spark plug socket seats securely on the plug, prevents rocking, slipping or cracking of porcelain.

(Continued on page 154)



1/2 Ton Low Cost TRAVELLING CRANE

Lifts and moves up to 1,000 lbs., operates easily in close quarters, low enough to go into elevators, small enough to operate in aisles and through doors.

Integral hydraulic pumping unit; no hose or couplings to fail.

Moves and places engines, dual wheels, oil drums, etc. Lifting height over 6 ft. Write for 1/2 ton Mobilcrane Bulletin.

LEMPCO

MOBILCRANES

Also available in 1 and 2 TON MODELS

For 35 years a leading
builder of machine tools

LEMPCO
PRODUCTS, INC.
Bedford, Ohio

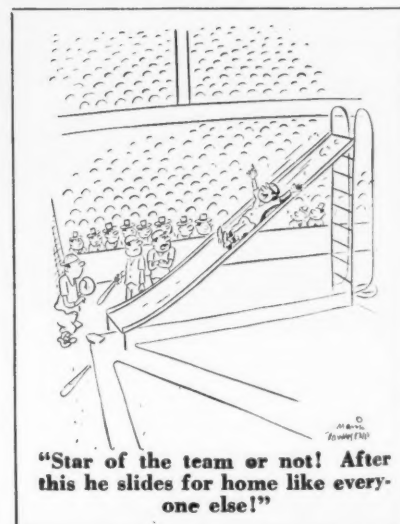
Gentlemen: Kindly send Bulletin on ☐ 1/2 ton Mobilcrane; ☐ 1 and 2 ton Mobilcrane.

NAME _____

COMPANY _____

ADDRESS _____

CITY _____



HERE'S AN **EASY** WAY TO MAKE EXTRA PROFITS:



YOU CAN GET INTO THE
NEW POWER STEERING
MAINTENANCE MARKET
WITH WEATHERHEAD
ORIGINAL EQUIPMENT
POWER STEERING
HOSE ASSEMBLIES

ALL YOU NEED
ARE THESE 8 DIFFERENT TYPES OF LINES



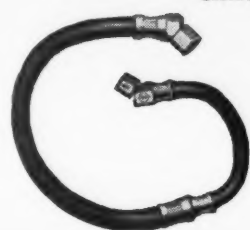
BUICK



CADILLAC



CHRYSLER-DESOTO



OLDSMOBILE



Get in this new business, *now*—and grow with the market. Replacement sales already are making important profits for the far-sighted dealers offering power steering service. Those dealers who get in the business now will be the leaders when volume is really big. You can be one of them—it's easy:

Weatherhead is original equipment on all five car makes using power steering. You can replace power steering hose assemblies on every job, by stocking just eight types of Weatherhead Assemblies—the brand selected by manufacturers for its outstanding record of superiority, with a safety factor of better than three to one.

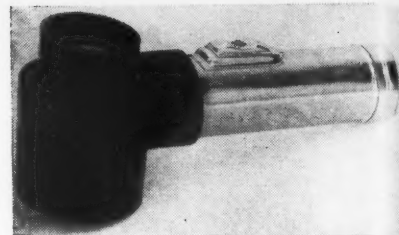
Get full information today—ask for Form J-1758. The Weatherhead Company, Dept. D, 300 East 131st Street, Cleveland 8, Ohio. In Canada: The Weatherhead Company of Canada, Ltd., St. Thomas, Ontario.



55. Inspection Tool

Champion Spark Plug Co.: Designed for the close examination of automotive spark plug firing ends, a new inspection tool combines a flashlight and magnifying glass of 2½ power. Known as the Spark Plug Viewer, it permits critical examination of fuel deposits for the entire length of the

insulator nose. It reveals incomplete or uneven abrasive cleaning, detects cracked or chipped insulator and checks the condition of the electrode sparking surfaces and points out the need for replacing spark plugs. The magnifying glass, which is 1½ inches in diameter, is mounted in a plastic housing which is combined with a standard two-



cell flashlight into a single unit. The hole in the bottom of the housing, which accepts the plug to be inspected, is shielded, to cut out excessive natural light.

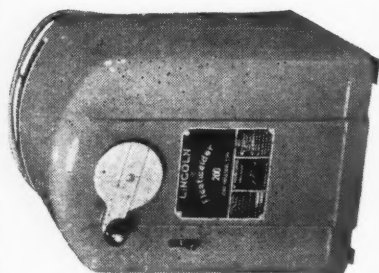
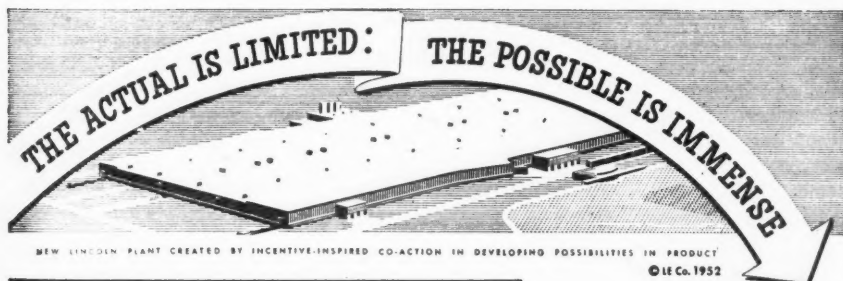


Fig. 3—LINCOLN "FLEETWELDER 200 AC"
Today's most versatile arc welder. Has wide range to handle 1/4" to 1/2" electrodes. Built of rugged, industrial construction, yet sells for less than other comparable arc welders.

LOW PRICED "FLEETWELDER" INSURES LOW COST REPAIRS

Repairs are Easier. With "Fleetwelder's" exclusive "Arc-Booster," the arc starts automatically every time the electrode touches the work. Eliminates electrode sticking . . . simplifies welding.

Repairs are Stronger. You get instant penetration at the start of every weld. And "Fleetwelder's" steady, easy-to-hold arc turns out dependable welds in flat, vertical or overhead positions . . . on cast iron or steel . . . on light or heavy work.

Easy to Install. "Fleetwelder" is compact, portable . . . moves about your shop on wheels. It operates on single phase current.

LINCOLN WELDED REPAIRS SAVE MAN-HOURS CUT COSTS



Fig. 1—Rebuilds Wrecks. Cracked frame is welded in a few minutes with Lincoln "Fleetweld* 7". Welded joint is stronger than original member.

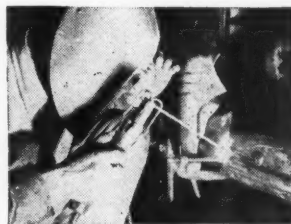


Fig. 2—Repairs Bumper. Butt welds parts in place with Lincoln "Shield-Arc* LH-70" electrode. Saves cost of new bumper.

*Preferred standard for welding electrodes on quality work.

SHORT CUTS MAN-HOURS

Bulletin 1301 on "Fleetwelder 200" free on request. Write to Dept. 301

THE LINCOLN ELECTRIC COMPANY

CLEVELAND 17, OHIO

The World's Largest Manufacturer of Arc Welding Equipment

56. Counter Display

Dorman Products, Inc.: A new pressure cap counter display has been announced by Dorman Products, Inc. It displays 12 pressure caps in five sizes for all 1940-1952 passenger cars and most trucks. They are individually tested to proper pressure specifications of four to seven pounds and every cap has non-corrosive, brass interior parts with a cadmium plated top.

57. Storage Batteries

Electric Storage Battery Co.: A new line of Exide heavy duty replacement batteries has been announced. They are available in both 6 and 12 volt units. The 6 volt batteries are made with 21, 25, and 41 plates per cell and respective capacity ratings of 168, 200, and 336 ampere hours at the 20-hour



rate. Features include a new grid alloy; new active material; new combinations separators and retainers; containers and levers newly designed for strength and safety; vibration-proof, heat resistant sealing compound; vent plugs of improved design and electrolyte of specific gravity.

(Continued on page 168)

"THEY'RE OFF MY NECK

at last!"

Wow! I thought customers were tough—I've spent

14 years building the reputation of a top paint shop. But too often

my men said, "Why in the blankety-blank don't we give better color match,

better blend-in, better gloss?" We do—now—with Martin-Senour

Hi-Solids Lacquer Colors. Now—every man in my paint shop can

turn in a top job every time. And all my men are off my neck

—because at last I've found the secret: it's factory-packaging—

the Martin-Senour way for uniform results every time!

MARTIN-SENOUR SYNTHOL ENAMELS ASSURE YOU OF UNIFORMITY IN

BEAUTY	COLOR	COVERING	DRYING
FLOW	DURABILITY	GLOSS	

Full selection of factory packaged colors—clear, clean and ready to use.

Perfect for air drying, baking or hot spray application.

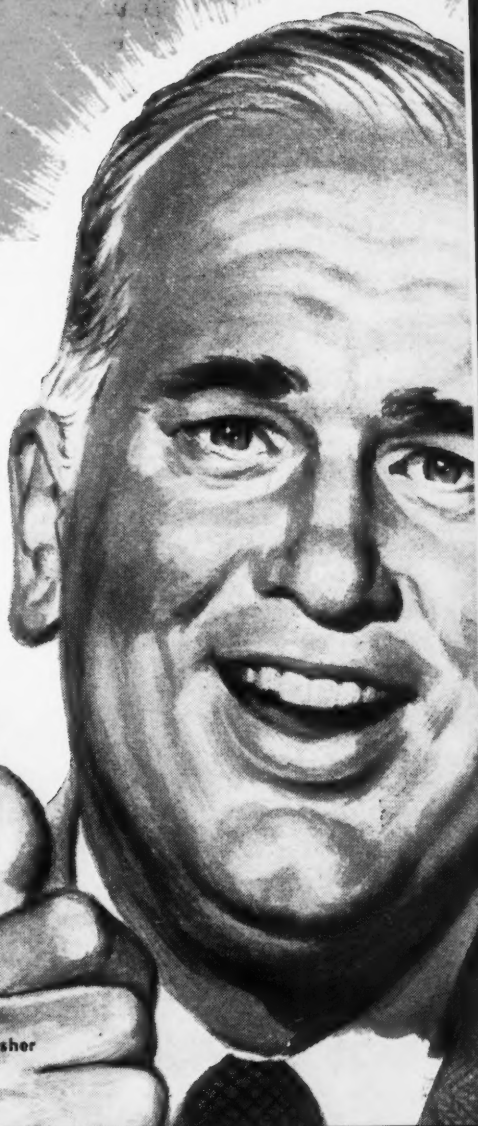
Customer satisfaction is built right into those finishes for over-all refinishing or spot repair.

Your N.A.P.A. Jobber has
MARTIN-SENOUR
Synthol Enamels

MARTIN-SENOUR

2520 South Quarry Street, Chicago 8, Illinois

Factory Packaging . . . the only positive control from Factory to Finisher



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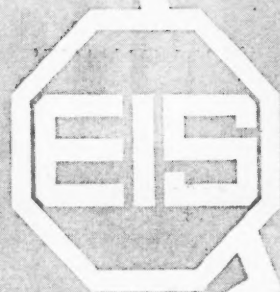
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1953

The BRAKE PARTS MERCHANDISER with a "one track mind"!



Brake Business is GOOD business! This sales-packed merchandiser was designed to save you time — and make a better profit for you. The EIS Brake Parts Merchandiser is completely sales-tested — the greatest "brake parts package" ever developed!

If you do Brake Service work

THE EIS MERCHANDISER IS FOR YOU, because: —

All parts, in their factory-fresh packages are right at your fingertips — clearly and easily identified. Reference wall chart tells you quickly what part you want.

If you're a Jobber Salesman

THE EIS MERCHANDISER HELPS YOU, because: —

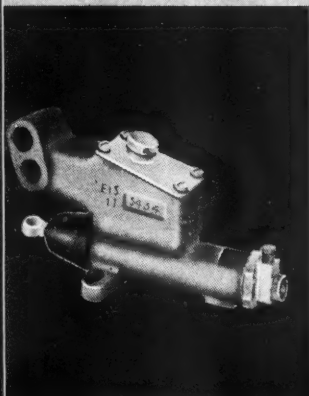
It provides a quick, complete inventory control. Ordering of fill-ins is speedy and no problem. You know at a glance the stock needed — a great time-saver for you.

EIS ASSORTMENTS ARE TAILOR-MADE WITH STOCK MEASURED TO YOUR SPECIAL NEEDS

The EIS Merchandiser puts you in the Brake Parts and Service business in the right way — the smart way! Assortments are planned to fit YOUR particular operation with plenty of extra space for expansion — even with the largest assortment! Want to put your Brake Service business on a sound, profitable basis? Order the EIS Merchandiser today! It's got a "one track mind" — ONLY to serve you right!

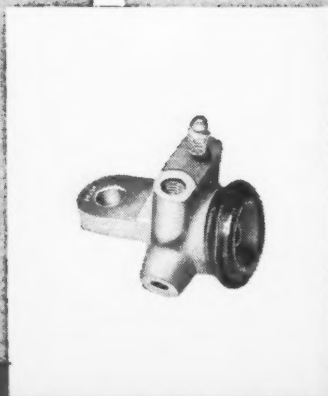
Write for descriptive catalog describing assortments available as well as other EIS Merchandising Aids.

**EIS
AUTOMOTIVE CORP.
MIDDLETOWN
CONN.**



MASTER AND WHEEL CYLINDERS

For all popular cars and trucks with new numbers being constantly added.



"SUPER 40" (Moderate) BRAKE FLUID

Meets SAE Moderate Duty Specification R72. Miscible with all standard brake fluids. Recommended for all passenger cars and small trucks.



"SUPER 50" (Heavy Duty) BRAKE FLUID

Meets SAE Heavy Duty Specification R71. For use in passenger cars, trucks, buses, taxis and tractors in all degrees of temperature.

HYDRAULIC BRAKE REPAIR PARTS



**CABLES
FLUIDS
PARTS**

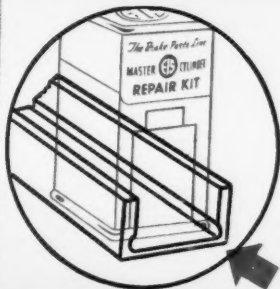
The BRAKE PARTS Line

**KITS
TOOLS
CYLINDERS**

EIS AUTOMOTIVE CORP

MIDDLETOWN, CONN.

WALL CHART GIVEN
Provides lightning-fast
reference — quicker than
the average catalog.
It's simple and durable.
Hangs on wall.
Furnished with these
EIS Merchandisers.



**EVERY PACKAGE IN ITS PLACE —
A PLACE FOR EVERY PACKAGE!**

EIS packages know their place in this Merchandiser. GROOVED TRACKS keep them standing neatly and in proper position for easy service — easy re-stocking. Numbers are clearly marked. Room for expansion shows at a glance.

**CABINET SIZE — 30" x 17" x 9 1/4" FURNISHED
IN VARIOUS PRICED COMBINATIONS**

Serves practically all Wheel and Master Cylinders on most popular model cars — Ford, Chevrolet, Plymouth, Buick, Dodge, Chrysler, Oldsmobile, Nash, Pontiac, Mercury, Lincoln, Cadillac, Packard, Hudson, Kaiser, Frazer, Willys, Studebaker and most light trucks.

**EIS REPLACEMENT STANDARDS MANY TIMES EXCEED THOSE SET FOR
ORIGINAL EQUIPMENT! ALL UNITS, BRAKE FLUIDS, AS WELL AS
COMPONENT PARTS ARE ENGINEERED AND PRODUCED UNDER ONE
ROOF. PRODUCT CONTROL IS GUARANTEED FROM START TO FINISH!**



STUDEBAKER Body Service

Continued from Page 81

point rivet. The vent handle is removed by driving the retaining pin out with a punch.

The inside door and window regulator handles are removed by pressing in the escutcheon plate and pushing out the retaining pin which holds the regulator handle in position. Then the Phillips head screw can be taken out to remove the door handle. The arm rest is removed by taking out the screws which hold metal plate underneath, thus revealing two long screws which hold the arm rest to the door.

The upholstery panel is held to the door with retaining clips which are pried out. When removing the panel, be careful not to lose the springs on the regulator and door handles.

The outside door handle is removed by taking out the two retaining screws and star washers (Fig. 2) from the inner edge of the door panel. The lock cylinder comes out when the horse-shoe retainer is removed. This is done by working through the inspection hole after the window glass is raised.

To take out the remote control, remove the two screws and star washers which hold the assembly to the door. Then lift out the remote control, turning it 90 degrees clockwise and pulling it out of the control link slot. The lock assembly is removed by taking out the pivot screw and washers from the remote control bell crank. Then remove the four screws which hold the door lock to the door. The lock and remote control links will then come out.

When removing the door window glass, you'll find two hairpin clips and washers holding the regulator arm to the door glass lift channel. The clips can be pulled off with a punch, once the window glass is fully lowered (Fig. 3). Then pull the regulator rollers out of the lift channel slots, turn the glass approximately 45 deg. clockwise, and remove the glass from the door. The regulator is held to the door with four screws and star washers. It can be slid out through an inspection hole in the door. (Fig. 4).

The door window front run can be removed by taking out the four screws and star washers which hold the run in the door panel. The rear run is held in with a clip and cement. When the clip is removed, the run can be broken loose from the cement.



Fig. 9 Location of hinge bracket, which is loosened for proper alignment.

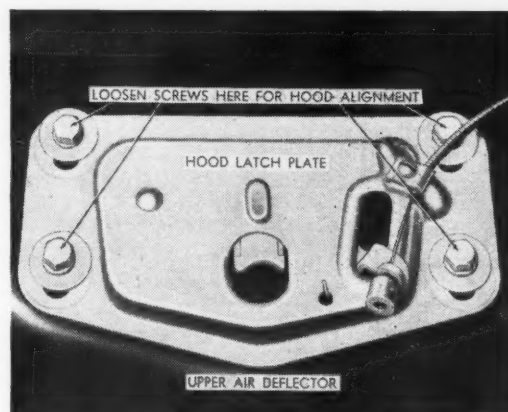


Fig. 10. The elongated holes in the hood latch plate provide for adjustment when aligning the hood.

The inner weatherseal is stitched to the garnish molding and can be replaced only with a special stitching machine. The outer weatherseal is clipped to the door and is easily removed by prying with a putty knife, screwdriver or similar tool. The window reveal molding is attached with clips, and can also be removed with

(Continued on page 160)

IT'S NEW!

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Remote Control
Single Acting

HYDRAULIC JACK

for body and fender work



C-2 "JacKit"
(Illustrated above)



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a blade-type of tool as mentioned above. This must be done with care to prevent marring the finish.

To remove the door check link, remove the rivet located at the doorpost end of the check link and pull it through the small inspection hole in the door panel.

Replacement of door and window mechanism parts is the re-

verse of the removal.

Provisions are made for door alignment at both the door hinges and at the striker plate. The hinges are adjustable at the door side of the hinge. Loosen the screws which hold the hinge to the door and move the door in the proper direction. Further adjustments can be made with shims inserted between

the hinge and door panel (Fig. 7). Proper striker plate adjustment is made by loosening the four retaining screws and moving the plate in the elongated holes provided.

Rear Quarter Window and Regulator

On two-door sedans, the following is the service procedure on rear quarter window and regulators. Remove the rear seat cushion, back, arm rest cover and arm rest. Then remove the rear quarter window garnish molding, regulator handle and escutcheon ring. Remove the screw which holds the front of the rear quarter trim panel to the door striker post. Pry gently on the front nailing strip and roll the strip forward to expose the tack heads. Then remove the tacks, being careful not to break the strips.



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After removing the tacks and nails which hold the rear of the trim panel to the nailing strip, remove the trim panel. Pull the sealing tape off the inspection holes and, after lowering the window, disengage the lift channel guide from the rear run.

Adjust the window height so that the window regulator lift arm pin is accessible through the inspection hole. After disengaging the pin from the lift channel, remove the glass through the window opening. Flatten the inner flange of the run as required to facilitate the removal of the glass.

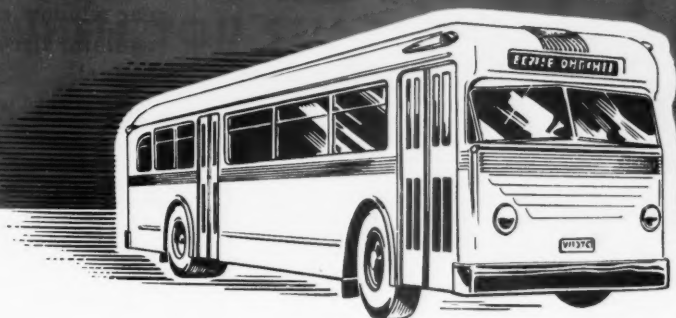
Remove the four screws and lock washers which hold the window regulator to the rear quarter panel.

(Continued on page 162)

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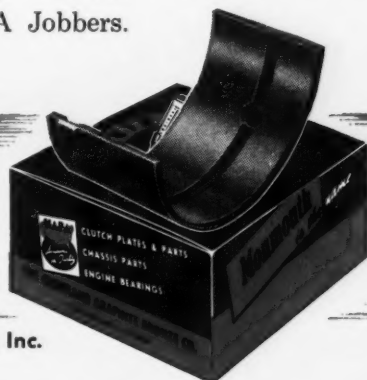


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Studebaker . . .

Continued from Page 160

Then remove the regulator through the front inspection hole.

Upon reinstallation, the regulator is inserted through the front inspection hole. The four screws and lock washers which hold the regulator to the rear quarter panel are then installed. Final tightening of the screws should be delayed until the window has been properly aligned.

Lower the glass and lift the channel through the window opening, engaging the front guide on the lift channel with the front window run. With the lift channel resting on the regulator, tilt the glass. Reach through the rear inspection hole, engage the rear guide on the lift channel with the rear window run. Then engage the regulator lift arm pin with the lift channel.

Shift the window regulator in its slots until the window travels freely in its runs and has no tendency to tilt forward or backward. After proper positioning, the four retaining screws can be tightened.

Cover the inspection holes with sealing tape and tack the front edge of the trip panel to the front nailing strip. Then spring the unfastened edge of the trim panel into position, being sure that the escutcheon plate spring is on the regulator shaft, and tack the rear edge of the trim panel.

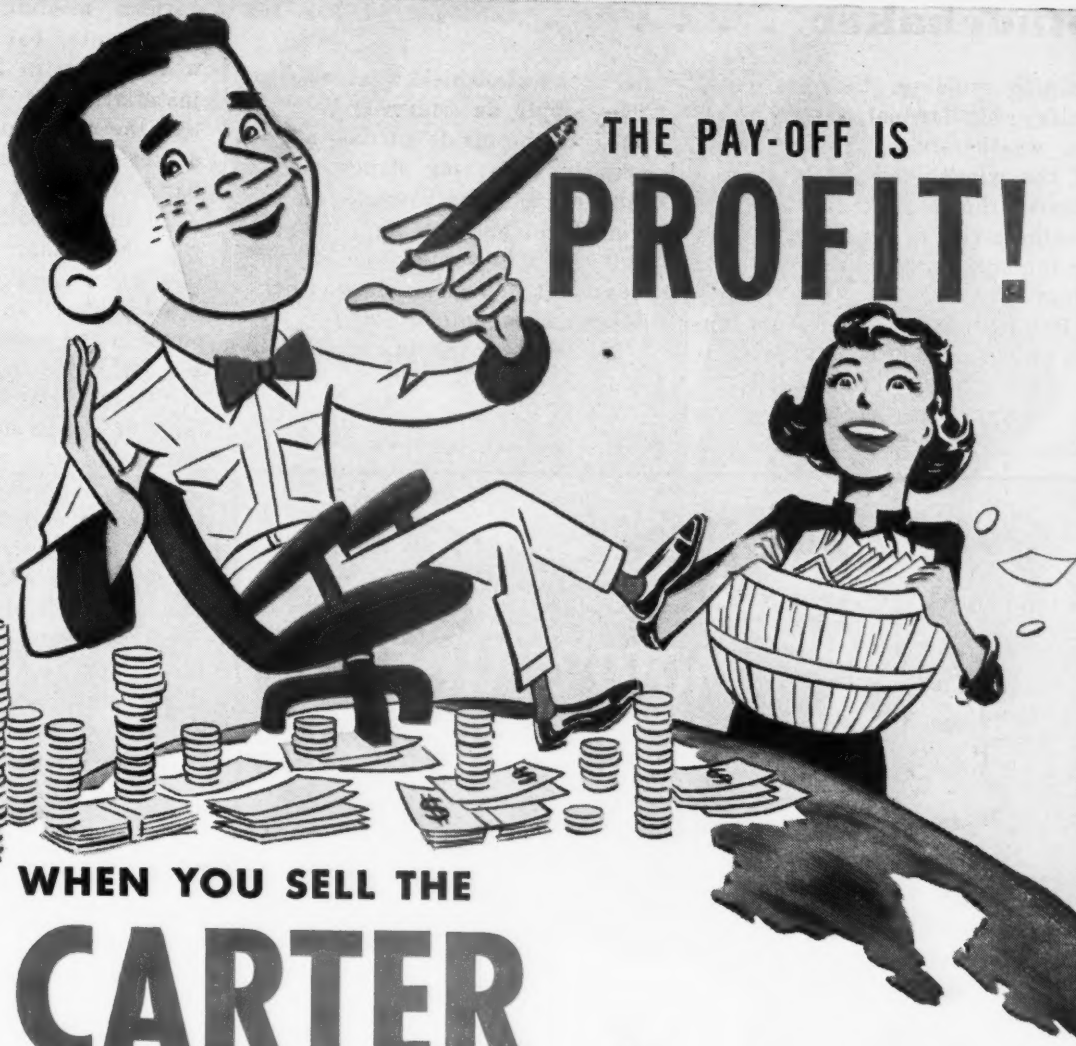
Install the screw which holds the front of the trim panel to the door lock striker post. Then install the escutcheon ring, regulator handle, garnish molding, arm rest, etc.

Windshield and Rear Glass

To remove the windshield, remove the center clip from the top of the inner center bar. Then remove the rear view mirror and inner center bar. After the inner center bar has been removed, the outer center bar with rubber weatherstrip will come off easily.

Remove the inside windshield
(Continued on page 164)

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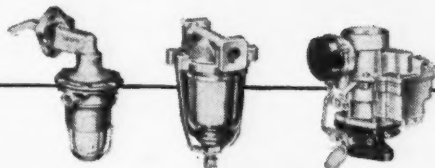
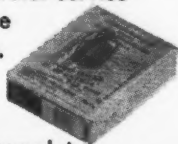
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garnish molding. Using a putty knife or similar tool, press the rubber weatherstrip over the flange of the windshield opening. Then remove the windshield from the weatherstrip by pushing inward on the upper outside corner of the glass (Fig. 8).

Before installing the glass, apply an approved sealer to the chan-


nel in the windshield weatherstrip. Then apply an approved bedding putty to the inside surface of the windshield-opening flange. Press the glass and weatherstrip into the windshield opening and, using a putty knife or similar tool, pry the weatherstrip over the flange of the windshield opening.

Install the inside windshield

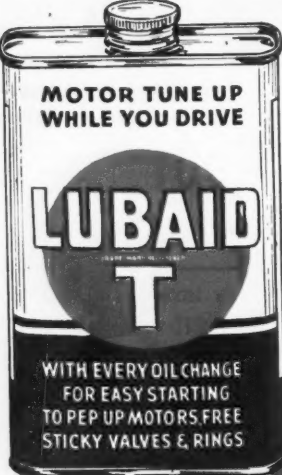
garnish molding and place the outer center bar with the rubber weatherstrip in its position. The installation of the inner center bar, the rear view mirror, and the center clip at the tip of the center bar is done last.

To install both sections of the windshield, place the weatherstrip on a bench, apply sealer to the glass channel, and insert both sections in the weatherstrip. Place a piece of twine around the weatherstrip under the lip with the loose ends of the twine centered at the bottom of the windshield. Then apply an approved bedding putty to the inside surface of the windshield opening flange and press the glass and weatherstrip into the windshield opening.

Insert two tapered hardwood blocks between the upper and lower edges of the two sections outward toward the sides of the body. Then pull the twine toward the center of the windshield so that the top of the weatherstrip will be forced over the windshield opening flange.



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(Continued on page 166)



Hood and Rear Deck Alignment

The following is the procedure for hood alignment. Unhook both hinge springs and loosen slightly the three bolts which hold each hinge plate to the cowl (Fig. 9). Then loosen the four cap screws which attach the hood latch plate to the upper air deflector (Fig. 10). Close the hood and shift it until proper alignment and spacing have been obtained. When loosening the



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hinge-to-cowl bolts, do not make them too loose or the hood will slip out of position when it is raised. After proper alignment has been obtained, raise the hood and tighten the bolts. Install the hinge springs and lower the hood, allowing the dovetail to center the hood latch plate. Then raise the hood and, without disturbing the cen-

tered position of the latch plate, securely tighten the four cap screws. If the preceding adjustments have not resulted in correct alignment, it may be necessary to shift the fenders, grille, or both.

For aligning the rear deck lid, adjustments can be made at the hinges and striker plate. For side adjustment, loosen the bolts which

hold the hinges to the trunk lid, move the lid sideways in the desired direction and tighten the bolts. For fore and aft adjustment, loosen the bolts which hold the hinges to the body, move the lid in the proper direction and tighten the bolts. To move the lid closer to or away from the body opening, loosen the bolts which hold the hinges to the wheel housings and the body. It may be necessary to remove or install shims between the top of the hinges and the body.

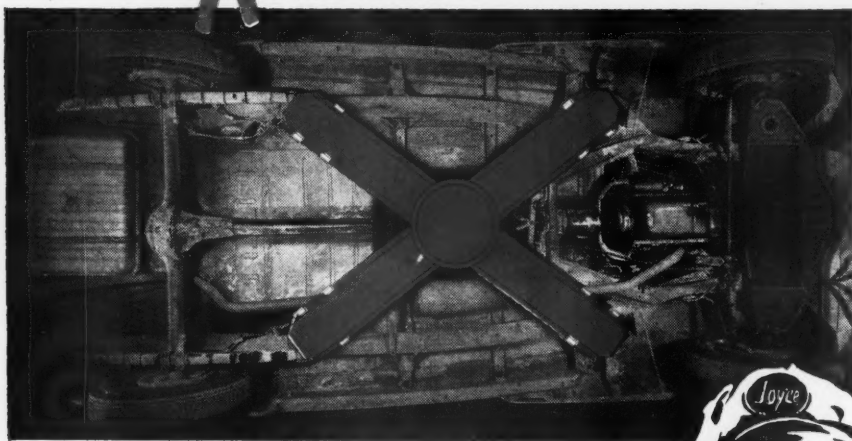
Striker adjustment may also be necessary to obtain a good fit. The striker plate has elongated holes for fore and aft adjustments, and shims for up and down.

Body Drain Holes

To minimize the chances of rusting at the bottom of doors and bodies, two drain holes are drilled in each door at the factory, and, on two-door sedans and convertibles, there are two drain holes in each quarter panel at the bottom. These drain holes should be cleaned out periodically with a fine wire and brush.

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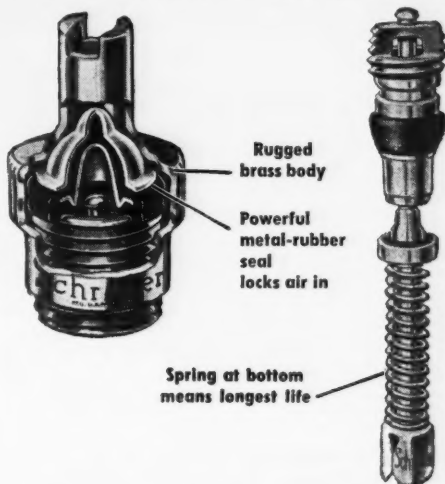
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ing over washboard roads. The manufacturer states that the auto stabilizer can be installed in just a few minutes with the aid of a screwdriver. It is attached to the rear cross member with four steel straps which are claimed to be stronger than bolts. Its maker reports that it has been proved to

minimize skids, swerves, tire squeals and cuts down on upkeep of car and tires. It consists of a hermetically sealed, internally polished tube which contains a permanently controlled fluid encasing an impact piston with just enough play for the piston to move around in any direction. It is said to silently stabilize the undesirable motions of any car.

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60. Frame Machine

Bee Line Company: Featured with the new "Beeliner 360" frame machine is the new tool group 14,
(Continued on page 170)



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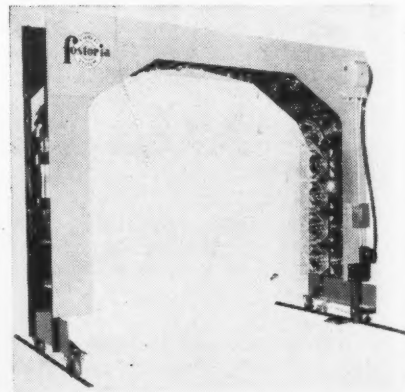
said to permit straightening difficult frames and restoring basic body alignment with a minimum of trouble. Although the group is of simple design, it is said to be very versatile because of the practically unlimited combination of hook-ups, to more efficiently handle all frame straightening operations. Because of the full 360 de-

gree angle of hook-up, the jack is always in line with the push or pull. It operates below all obstructions, out of the way.

61. Drying Ovens

The Fostoria Pressed Steel Corp.: The Model 414V traveling oven features the Evenray 24-karat gold-plated radiant wall construc-

tion, designed to eliminate hot spotting and to assure uniform results at low operating cost. The low-cost 414V operates within the spray booth or spray enclosure and can accommodate both passenger



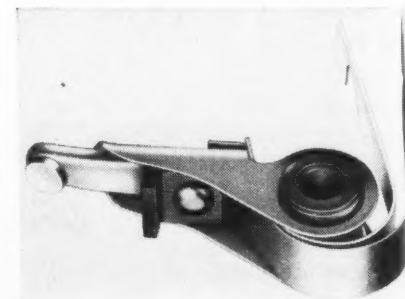
cars and panel trucks. It reverses automatically and the distance of travel is easily adjusted for varying car lengths. Models are available for both 240 volt, single phase and three phase services. Total connected load is 10 kilowatts.

62. Turn Signals

K-D Lamp Company: New economy Class A turn signals are available from this firm. The Lucite plastic lens, made by Stimsonite, is first in non-fading red or amber. The lens is locked in place by a steel door. The lights are available in double face, single face or flush mounting.

63. Ignition Contacts

Echlin Mfg. Company: Ignition contacts are being featured by this firm. Points are mirror finished tungsten, the manufacturer states, burnished to absolute



smoothness. A non-slip, grooved bushing prevents the contact arm from slipping on the bushing and grounding. The copper conductor strip provides unhampered current flow.

(Continued on page 172)

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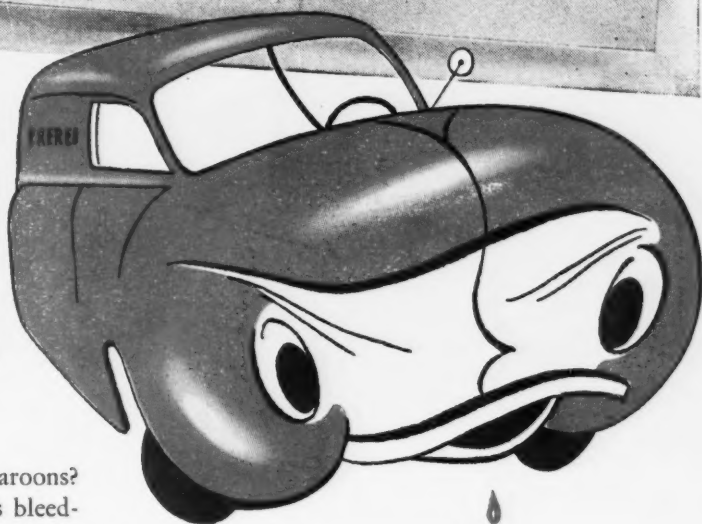
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Red-Chek meets a long-felt need for a new and better way to prevent discoloration of top-coats applied over previous synthetic or lacquer finishes.

A white top-coat test proves Red-Chek's sealing properties. White stays white. Red staining elements are permanently locked beneath. Red-Chek makes possible higher quality final coats, too. Pigments are very finely ground . . . provide a smooth, tight film and better holdout. Red-Chek levels well, saves labor—no sanding is needed. Checking or crazing of the top-coat is prevented because it contains no brittle sealing materials such as shellac.

For ease in handling, Red-Chek is packaged in quart and gallon *metal* containers. It has no corrosive properties to cause leakage. Order today through your Sherwin-Williams OK Automotive Jobber. The Sherwin-Williams Co., Automotive Division, Cleveland 1, Ohio.

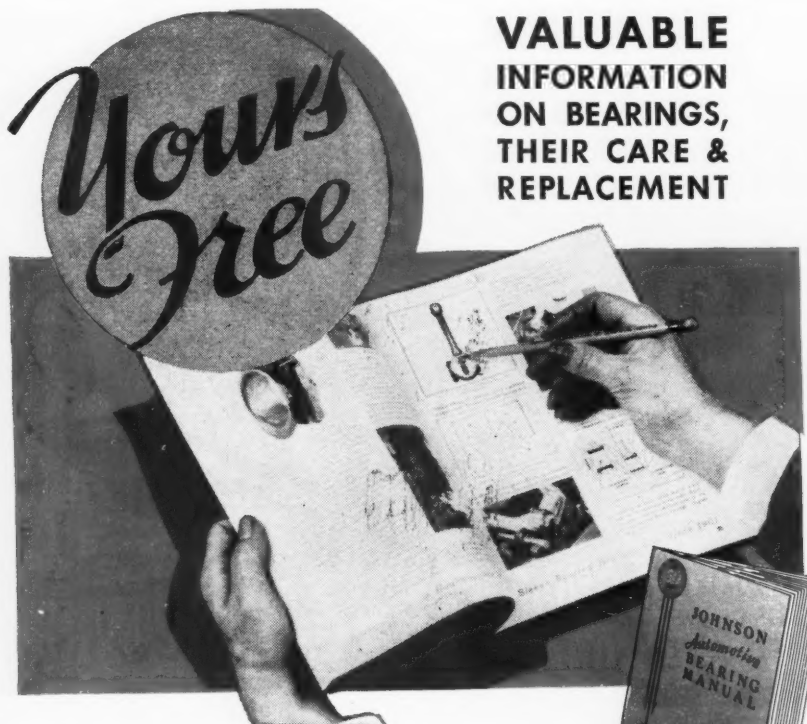


SHERWIN-WILLIAMS
AUTOMOTIVE FINISHES

64. Exhaust Gaskets

Felt Products Mfg. Co.: An assortment of exhaust flange gaskets, displayed on a convenient hang-up board, offers a complete exhaust gasket service for all popular cars. This is being made available on a special deal by the Felt Products Mfg. Company. This display contains all of the best

selling, rapid turnover gaskets of this type and is provided with eyelets so that it can be hung in any convenient place. Other added features are the handy hooks that keep each car model gasket set readily visible for stock control. The easy-to-read make and model indexing is said to simplify selection.



**VALUABLE
INFORMATION
ON BEARINGS,
THEIR CARE &
REPLACEMENT**

You will find this new Automotive Bearing Manual brimming over with good, practical information. It contains a diagnosis of bearing difficulties and failures, and a section on correction of these troubles. It is written to guide you in the correct method of removing, installing and maintaining automotive bearings. This Johnson Manual is for the use of practical mechanics who service automotive engines and for students in automotive trade schools.

A copy will be sent **FREE** if requested on your business letterhead; also to students and instructors who write on trade school stationery.

JOHNSON BRONZE COMPANY,
455 South Mill St., New Castle, Pennsylvania.



JOHNSON BEARINGS
Sleeve-B Type

65. Shock Merchandiser

Gabriel Company: New packaging for Gabriel "Silver E" heavy duty shock absorbers has been introduced. The new counter display and merchandiser has been designed to hold sets of four shocks



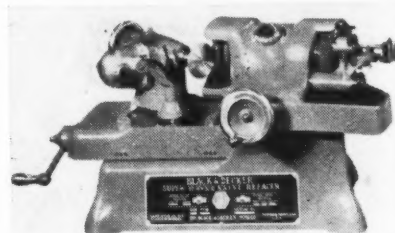
for all popular cars. The cover of the "foursome" carton pulls up to become a counter display and silent salesman with colors of silver and blue to complement the silver "E" within.

66. Universal Joints

The Perfection Gear Company: A complete new line of universal joints is available from Perfection Gear. The company claims that these new universal joints are made of finest alloy steels, heat treated and rigidly inspected.

67. Electric Tools

The Black & Decker Mfg. Co.: A complete line of portable electric tools is featured by Black & Decker. Also, emphasis is given to the Black & Decker super service valve refacer. This refacer will traverse grind all valves, eliminating plunge grinding of 15 deg. to 90 deg. (flat type) valves. The unit features wet grinding of both



valves and attachment wheels with a coolant valve on top of the wheel head which feeds coolant to either grinding wheel that is being used. Bearing adjustment on feed screws with automatic and play takeup
(Continued on page 174)

WHEN
BATTERIES
ARE
THIRSTY...



...Call for the New

NO. 84 EDELMANN

WATER BOY



**BATTERY
FILLER**



Brand New Design! New Flexible Material!

Every detail engineered for easier, faster battery servicing!
Large top opening designed for holding hydrometer. Light weight
makes carrying easier — perfectly balanced even when full.

New safe-grip bottom prevents slipping or scratching.

Made of new resilient Polyvinyl Chloride — tougher, more
rugged than rubber! Resists acid . . . oil . . . chemicals . . . extremes
of heat and cold. One-piece molded construction eliminates
seams — won't crack or break.

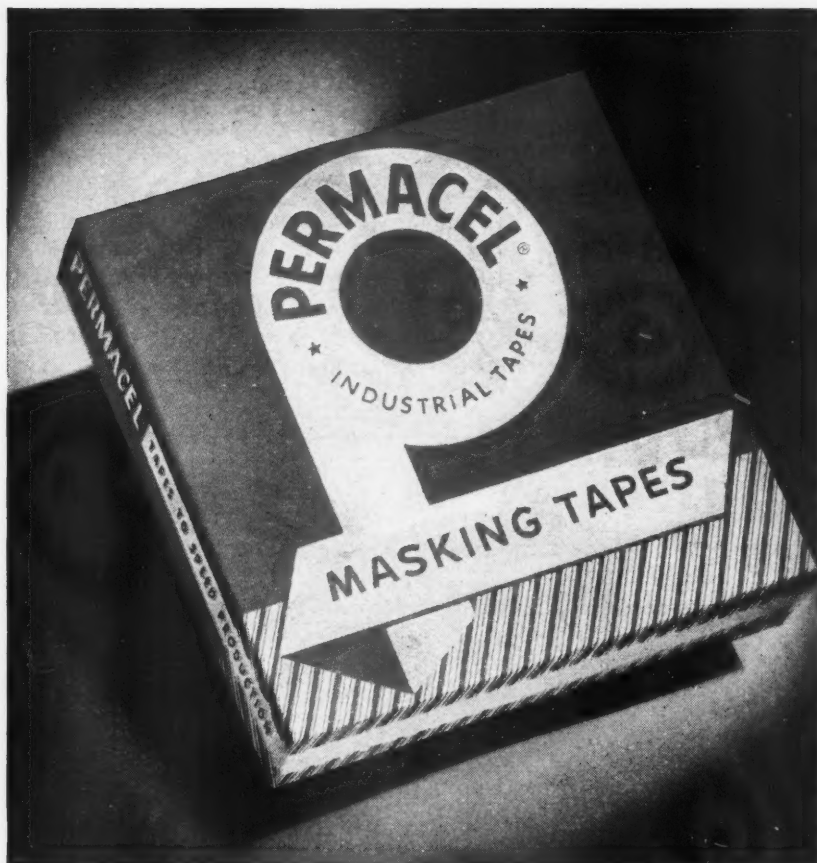
E. EDELMANN & CO.

2332-56 W. Logan Blvd. • Chicago 47, Illinois

**WONT BREAK,
CRACK OR TIP**

- HOLDS MORE THAN A GALLON
- EASY COMFORT-GRIP HANDLE
- LONG FLEXIBLE HOSE FOR
HARD-TO-REACH BATTERIES
- TOUGHER THAN RUBBER
- MOLDED-IN SOCKET
FOR HANGING HOSE

**CHOICE OF 4
SPARKLING COLORS!**



*Easy on ... easy off
but on the job,
it really
sticks*

INDUSTRIAL TAPE CORPORATION, NEW BRUNSWICK, N. J.

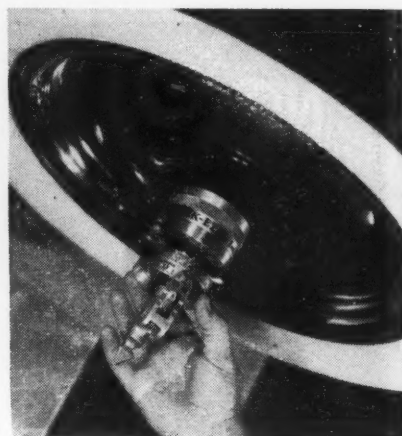
ASIdeas . . .

Continued from Page 172

for wear is said to assure the operator of producing accurate valve jobs every time.

68. Wheel Aligner

Kwik-Ezee, Inc.: The Kwik-Ezee wheel alignment unit is said to afford complete front end analysis because all readings are taken from the true surface of the wheel—the hub flange. Accurate steering geometry readings are said to be assured by taking the readings at spindle height, where they originate and since the Magnetic



Micrometer becomes an integral spindle where it is attached, it need not be removed until the job is finished. This permits a constant check as the work progresses. The micrometer is attached to the hub flange by an Alnico magnet. As a special service, the company has published a slide chart giving the latest front end specifications.

69. Shop Lift

U. S. Air Compressor Co.: The new Frame-Grip Floating Body Lift is designed to remove the dead weight of body and engine, insuring the free flow of lubricants into the fittings. Safety pads, equipped with spring-mounted pins provide a sure grip on the frame of any make car. With the lift supporting the frame to remove the weight of the engine and body, springs are completely relaxed and all parts are free, for easy accessibility.

(Continued on page 176)

Chilton's MOTOR AGE, JANUARY, 1953

U.S.

FRAME • GRIP

FLOATING BODY[®] LIFT

• Trade Mark

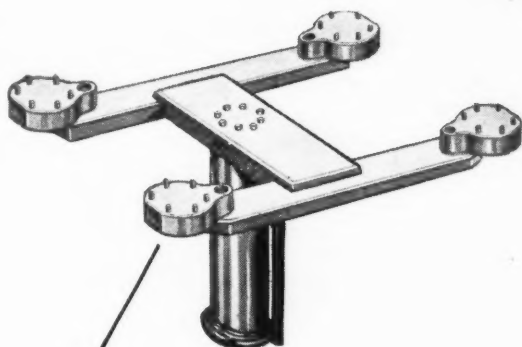


FOR MECHANICS

Removes dead weight of body and engine

FOR LUBRICATION

Insures free flow of lubricants into fittings



PATENTED SAFETY PADS SECURELY HOLD ANY MAKE CAR

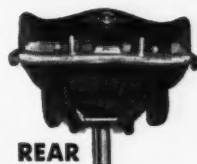
Full or Semi-Hydraulic

THE LIFT THAT DOES EVERYTHING

Quicker... Faster... Profitably

SAVES TIME • SAVES MONEY

Write for complete information



FRONT or REAR

All Parts easily accessible—from any working position

The Complete Service Equipment Line

UNITED STATES AIR COMPRESSOR CO.

5300 Harvard Avenue • Cleveland 5, Ohio

AIR COMPRESSORS • HYDRAULIC LIFTS • LUBRICATING EQUIPMENT

70. Brake Drum Lathe

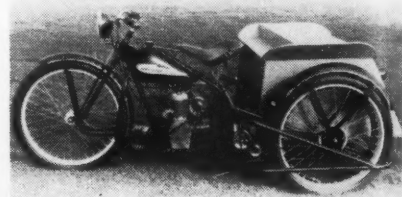
Van Norman Company: The new Number 302 handles drums up to 24 inches diameter and 10 inches wide. It takes all passenger cars and 2½ drums with wheels and tires mounted, also extra heavy truck drums, and is said to turn and grind simultaneously. "The

Little Brute" as it is called, while being compact, is designed for heavy duty work.

71. Delivery Cycle

Simplex Mfg. Corporation: A three-wheel light weight "Fifth-Ton Truck" suitable for transportation of men and/or materials

has been announced by this company. The single cylinder, two cycle air cooled engine of this truck develops 4 horsepower. The truck can make 25 miles per hour with consumption of 75 miles per gallon of gas. It carries 400 pounds in its spring loaded box. There are four forward speeds, and reverse is not necessary as the truck will turn in a 7½ ft.



radius. The truck can also be rolled backward easily because of its 250 pound weight. It is available with a standard foot operated clutch pedal or a completely automatic clutch controlled by the throttle. Brakes on both rear wheels are automobile type with internal expanding 5-inch brake shoes.

72. Dealer Film

Raybestos Div. of Raybestos-Manhattan, Inc.: A new sound slide film on brake service work is now available. Especially prepared for mechanics by Raybestos engineers the new film contains vital information on brakes and how to service them. All the popular brakes in use today are taken up individually in the film and helpful hints for servicing them are given. The film also contains a complete section on brake trouble-shooting.

(Continued on page 178)

"FAVORITES . . ."

at the A. S. I. Show, and

RECOGNIZED EVERYWHERE!

WATER PUMP LUBRICANT

POWDER RADIATOR REPAIR

LIQUID RADIATOR REPAIR

SUPER SOLVENT

BLOCK SEAL

TITESEAL

SPEED-ZIT

IGNITION SEAL

LUBE-ZIT

LIQUID WRENCH

SOLDER SEAL

HERE are ten Solder Seal leaders. The world-famous Solder Seal line embraces 23 time-tested, all-season products that have brightened the nation's service stations for more than a generation. This flaming red seal can point the way to more satisfied customers and time & money savings for you, too! Solder Seal will always stand for top quality and better performance.

CARE WILL SAVE YOUR CAR

GET IT FROM YOUR JOBBER

RADIATOR SPECIALTY COMPANY • CHARLOTTE, NORTH CAROLINA
RADIATOR SPECIALTY COMPANY OF CANADA, LTD., TORONTO





YOU ARE INSTALLING YOUR REPUTATION, TOO!

Protect it with

American
REG. U.S. PAT. OFF.
Brakeblok

THE SAFETY BRAKE LINING

Ask your jobber to exchange your old brake shoes—
 for bonded shoes—lined with American Brakeblok.

When a customer brings his car in for a
 reline, he depends on you to see that he gets
 his money's worth. If the lining wears exces-
 sively, requires too frequent adjusting, gets
 hard or noisy, he blames it on you . . .
 and takes his work elsewhere.

Protect your reputation . . . and your work-
 manship . . . with American Brakeblok.
 It has been recognized for years for its high
 quality. It wears slowly and evenly, requires a
 minimum of adjustment. It gives the same
 soft pedal, the same instant response, throughout
 its long life. Don't risk losing your customer's
 confidence and goodwill. Recommend and install
 American Brakeblok, The Safety Brake Lining.



Copyright 1952, American Brake Shoe Co.

AMERICAN BRAKEBLOK DIVISION
 DETROIT 9, MICHIGAN

73. Direction Signals

R. E. Dietz Company: New directional signals featuring Stimsonite Lucite Lenses are featured by Dietz. Measuring $2\frac{1}{8}$ inch deep, the signals are round based with single hollow stud mountings to reduce vibration. Models are also available for recess, flush mounting. The switches are burn-

out proof of either self-cancelling or non-cancelling type. They may be had for 6 or 12 volt systems with single or double base light units.

74. Combination Crane

Star Machine & Tool Co.: Star's latest development is an optional attachment for operating its Star

Hydro-lift combination crane. Electric power unit makes operation of the lift three times faster than hand operation. The handle is moved forward and the power unit raises any load up to two thousand pounds without any effort by the operator. The handle is moved back and the load is lowered. Power is supplies by standard six volt automotive battery which is kept charged by the truck engine or re-charged by a quick charger.



"Ask any mechanic who is a mechanic about Bonney tools. You'll get the straight dope on why they're tops.

Believe me, you get the *best* tools at standard prices. I *know*—I sure check price.

My tool kit is full of Bonney knuckle-savers. They have a 'feel' that makes you sure of first class work. That means more dough in the pay envelope.

Another thing! If you're short on cash, take a look at a BON-E-CON* tool. They carry the standard Bonney guarantee."



Remember. Your local Bonney jobber, as well as Bonney, stands behind the tools you buy. He has Bonney tools priced to fit your needs as well as your pocketbook.

BONNEY FORGE & TOOL WORKS • ALLENTOWN • PENNSYLVANIA

75. Portable Power Saw

Milwaukee Electric Tool Corp.: A self contained power portable saw has been announced by this firm. It is not an attachment, but a unit within itself designed for particularly heavy duty service of

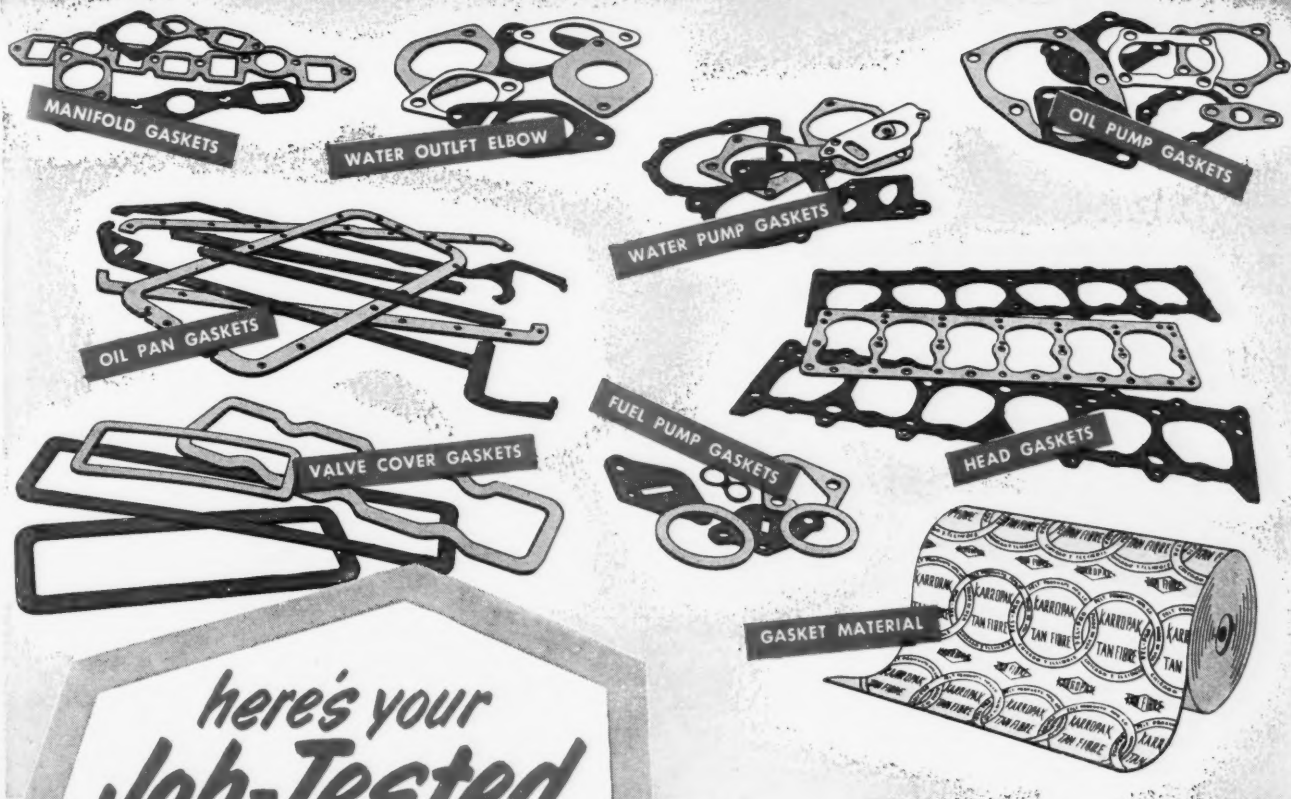


the type that would be encountered in automotive repair work. It cuts through sheet steel, wire, nails and other materials. It has a $\frac{3}{4}$ inch stroke and operates at 2250 strokes per minute. The complete unit $14\frac{1}{2}$ inches long and weighs $6\frac{3}{4}$ pounds.

76. Drum Lathe

Lempco Products, Inc.: A new drum lathe featuring eight cutting feeds is now available. The tool can be changed from .0025 inches to as much as .0200 inches per revolution at the operator's discretion. This is designed to turn drums to a finish which matches car manufacturer's standards in a single pass of the cutting tool. It has three spindle speeds as well as eight cutting feeds and is powered by $\frac{1}{2}$ hp. motor.

(Continued on page 180)



here's your
**Job-Tested
Team**



FEL-PRO COMPLETE GASKET LINE

SPECIAL DEAL!!

New—Time-Saving—Handy

EXHAUST FLANGE GASKET DISPLAY ASSORTMENT

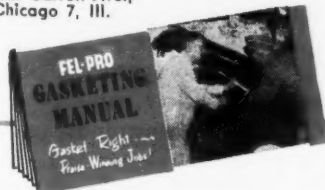
A complete exhaust gasket service for all popular cars, attractively displayed on a convenient hang-up board. Handy hooks for visible stock control. Easy-to-read indexing for quick gasket selection.



Order from your Fel-Pro Jobber TODAY!

FREE GASKETING MANUAL

Over 30 valuable gasketing "Tips" combined into this handy, pocket-size booklet. See your Fel-Pro Jobber or write TODAY to: FELT PRODUCTS MFG. CO., 1521 Carroll Ave., Chicago 7, Ill.



FAST SERVICE ASSURED By Warehouses Near You
ATLANTA, DALLAS, BOSTON, NEW YORK, LOS ANGELES,
OAKLAND, PORTLAND



Little Drip says: "Wise mechanics know that no installation is better than the gasket and no gasket is better than the installation. To stop me for good—use the 'Job-Tested' Fel-Pro Team!"

...and FEL-PRO INSTALLATION KNOW-HOW

You don't ever have to accept a substitute. No matter what gasket you need—oil pan, manifold, valve cover, water pump, fuel pump, etc.—there is a new Fel-Pro Gasket just like the original. And when you install new Fel-Pro Gaskets and use the Installation Know-How "Tips" contained in the new Fel-Pro Gasketing Manual, you've got a "Job-Tested Team" for making a praise winning job—instead of a comeback!

Mechanics everywhere know that re-using the old gaskets is one of

the main causes of comeback work. They know that comebacks are expensive—not only in time and profit but in customer confidence as well. So, don't take chances no matter how good the old gasket looks. Just a few cents cost and a little effort can make all the difference. You can't beat re-gasketing with new Fel-Pro Gaskets and you can't beat the Installation Know-How in the new Fel-Pro Gasketing Manual for doing the job right everytime.

Make every job a **Praise-Winner**—instead of a comeback—
with this "Job-Tested Team!"



XR-5986R

77. Service Jack

Milwaukee Hydraulic Products Corp.: A new compact hydraulic service jack employs a special leverage principle. A hydraulic ram of the jack pivots at its base like the boom of the crane and is harnessed by a tension member which takes the place of cables

of the crane. As the ram extends in length, it reacts against the tension member and thus causes the jack to lift with the same uniform efficiency of a large crane. Thus the leverage remains the same at all positions. The jack is equipped with all caster wheels with both radial and thrust ball

bearings. Chrome plated pistons are designed to resist rust and corrosion.

78. Piston Rings

Perfect Circle Corp.: Perfect Circle's 2 in 1 piston ring set is being featured for 1953. The top compression rings and the steel rails of the oil stopper oil rings in the 2 in 1 set are plated with solid chrome. As a result of the protection against scuffing and scoring afforded by chrome and its high resistance to abrasive wear, the manufacturer states that the life of the rings, cylinders and pistons is more than doubled. Another feature of this set is that its two different sets of oil expander springs give the mechanic the choice of spring pressures.

79. Portable Welder

Ampower Products Co.: A portable spot welder with an electronic timing control is offered by this firm. The control enables the operator to set the timing control for the pre-determined period to make perfect welds, thereby taking the guesswork out of spot welding. The transformer, switch, and electronic control are all contained within the aluminum housing. The transformer is suspended within the housing, free on all sides to allow for complete circulation of air and dissipation of any heat.

80. New Insulation

Whitaker Cable Corp.: Spark Plug cables, battery cables, primary cables and drop light cables now being marketed by this firm have the new thermo-plastic insulation "Duravin." This product is said to be a special, thick, double walled insulation with a high dielectric strength. It has been proven resistant to oil, gasoline, moisture, corona, acid, heat and cold. The company claims that by sheathing their cable products in "Duravin" they increase the out-burning efficiency of those products but also extend a serviceable life.

81. Fitting Stock

Imperial Brass Mfg. Co.: A new brass fitting stock for repair shops
(Continued on page 182)

For 50,000 Miles of

Clear Vision!



Install

AIRTEX

dual type

Fuel & Vacuum PUMPS



Equipped with the famous
AIRTEX 50,000-Mile
Guaranteed Diaphragm

"CLEAR-VISION" windshield wiper action demands perfect pumping, that only a perfect diaphragm can insure. That's why millions of cars need AIRTEX "Dual-Type" Fuel-and-Vacuum Pumps, with the famous AIRTEX 50,000-mile guaranteed Diaphragm. For better windshield wiper action, bigger sales, and increased profits, sell the double unit—sell AIRTEX "Dual-Type." There's a "Dual-Type" Pump to fit every popular car and truck on the road.

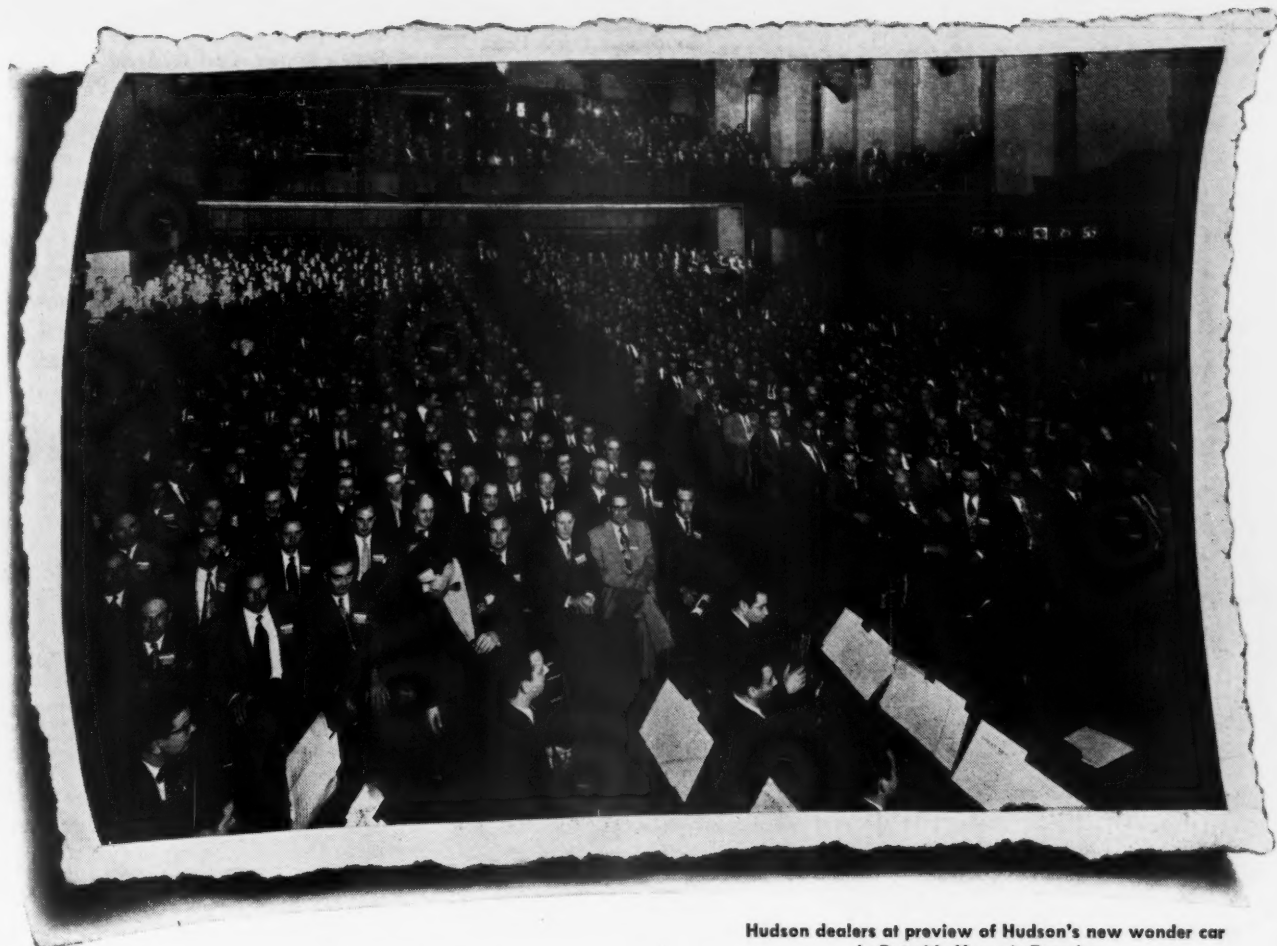
WRITE FOR CATALOG TODAY!

AIRTEX

AUTOMOTIVE DIVISION

FAIRFIELD, ILLINOIS

WORLD'S LARGEST INDEPENDENT MANUFACTURER OF FUEL PUMPS



Hudson dealers at preview of Hudson's new wonder car
in Detroit's Masonic Temple.

You should have been in Detroit Nov. 24th and 25th!

when Hudson showed its new wonder car to Hudson dealers and prospective dealers

The Hudson dealers and prospective dealers who previewed the new wonder car and the complete Hudson line for '53 in Detroit, Nov. 24th and 25th, were one of the most enthusiastic groups ever assembled to view a new line of cars. They have a selling opportunity rarely, if ever, equalled in the industry!

The widest appeal

With the introduction of Hudson's new wonder car—the Hudson Jet—in the low-price field, Hudson dealers will have a 94% coverage of the American new-car market . . . a greater coverage than that of dealers handling any other make of car!

Unequalled opportunity

With the new Hudson Jet in the low-price field, the Hudson Wasp and Super Wasp in the medium-price field, and the Hudson Hornet in the upper-medium-price field, Hudson dealers are set to do business with a massive cross section of their areas' new-car buyers.

A few choice dealer franchises are still available for qualified applicants . . . but you should act now. Investigate the Hudson franchise and take advantage of this great selling opportunity. Send in the coupon below, today!

HUDSON

C. A. J. Hadley, Sales Manager
Hudson Motor Car Company, Detroit 14, Michigan

Send me complete information on the Hudson dealer franchise and advance details on the new wonder car. I understand that all such information is to be confidential.

Name

Address

City & State

Business Position

is described as "Panoramic" since it is constructed so that every fitting is in plain sight at all times. The cabinet is of steel and brass construction and furnished at no extra charge to the dealer.

82. Hydraulic Lift

The Joyce-Cridland Co.: The new Joyce X-Master single post

automotive lift features under car accessibility and quicker car spotting. All parts of the car are accessible and the chassis is completely relaxed for better lubrication. The lift accommodates more than 90 percent of all automobiles on the same setting of the frame contacts. Other settings are quickly made for cars with special frame con-

struction. The lifts are available in three types, full hydraulic, air operated; semi-hydraulic, air operated; and full hydraulic, electrically operated.

83. Color Service

Briggs Mfg. Company: The Briggs Mechani-Mix Color Service, known as the "Treasure Chest of Colors," is said to make over 4,000 factory matched colors in either lacquer or enamel by the use of 24



base enamel colors and 24 base lacquer colors. The service provides for supplying any color in any quantity. Features claimed for this service are reduced inventory, savings in floor and storage space, increased profits and convenience.

84. Steering Hose

Weatherhead Company: Power steering hose assemblies are the newest addition to the Weatherhead line. Weatherhead furnishes complete "pressure" and "return" hose lines which are factory tested at 1500 psi. A groove or threaded insert holds the hose firmly in the fitting so that connections are not affected by vibration or pressure.

(Continued on page 186)

Another Great AMMCO TRIO

...for cylinder reconditioning



Model 2100 Ridge Boremer
Range 2 9/16" to 5" —
Carbide Cutter will even
cut steel sleeves—Cham-
fering fixture available.



Model 300 Range 1 1/4" to 5 1/4"
and Model 1450 Range 1 1/4" to
2 1/4" Cylinder Hones—Self-lubrica-
ting—No flying dust—Fast cutting
—Corrects taper and out-of-round.



Model 450 Range 2 1/4" to
4 1/4" and Model 900 Range
4 1/4" to 5 1/4" Cylinder Sur-
facing Hones—Surface cylin-
ders in 20 seconds—No
adjustments necessary.



See your
Ammco jobber



AMMCO TOOLS, INC.

2102 COMMONWEALTH AVENUE
NORTH CHICAGO, ILLINOIS

TIRE SALE

while they last



"There's Clayborn—a wizard at merchandising!"

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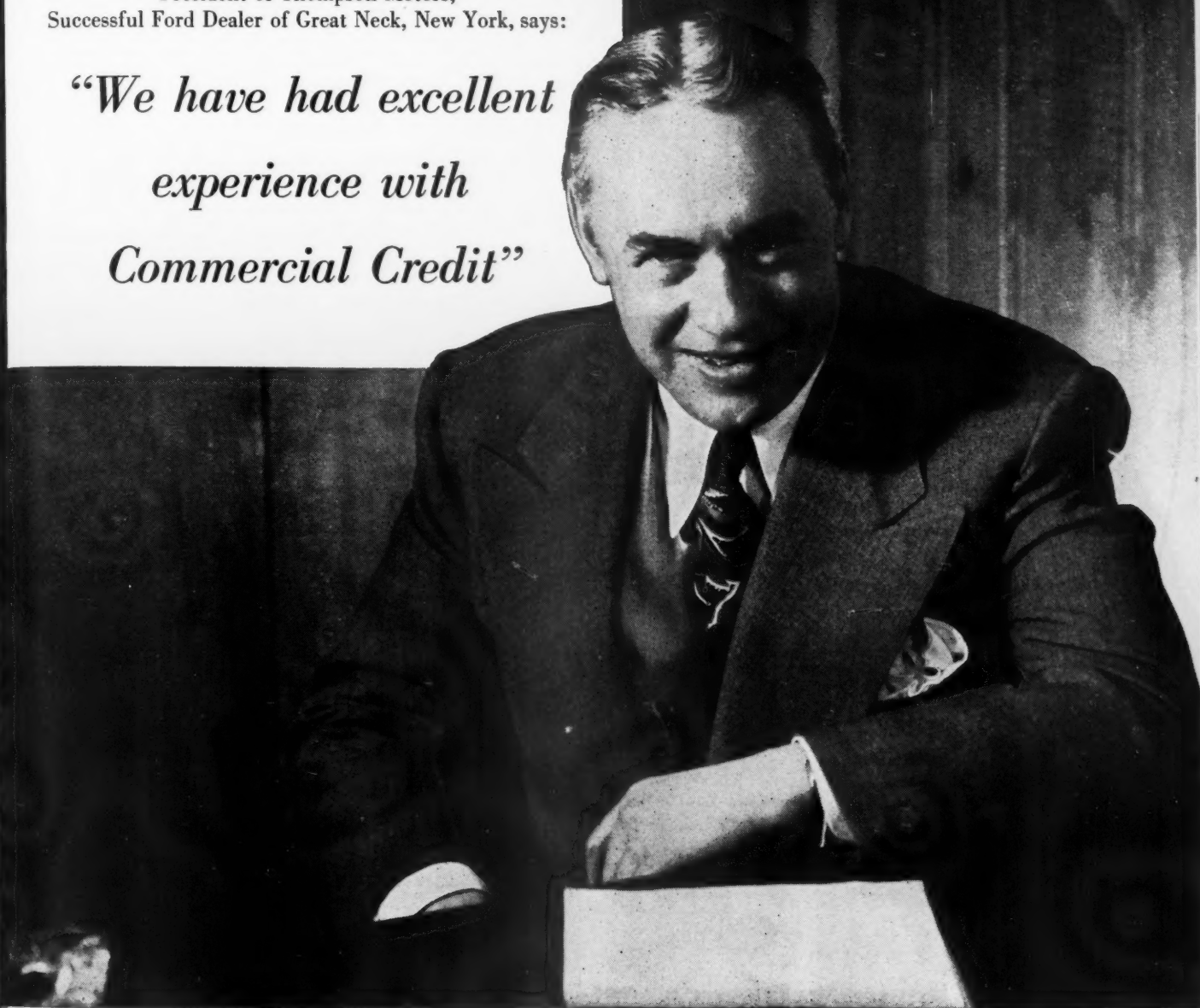
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53

MR. JOHN H. THOMPSON,
President of Thompson Motors,
Successful Ford Dealer of Great Neck, New York, says:

*"We have had excellent
experience with
Commercial Credit"*



MR. THOMPSON ALSO SAYS, "COMMERCIAL CREDIT has been very helpful in training our sales organization in closing time sales. Their quick handling of credits has enabled us to deliver cars and trucks in the shortest possible time. We also appreciate their advice on business conditions and their friendly attitude."

Mr. Thompson also mentioned COMMERCIAL CREDIT's "good follow-up system" and commented that "COMMERCIAL CREDIT's Car Repair Finance Plan is used often and is a desirable feature."

. . .

Dealers who have worked with COMMERCIAL CREDIT for 10, 20, 25 years or more look upon this association as far more than an important tool for closing time sales. They have found COMMERCIAL CREDIT's business "know how," complete facilities and ample resources can be relied upon in times of war or peace, prosperity or depression.

Call or write your nearest COMMERCIAL CREDIT office. Ask to see "The Dealer's Stake in Time Selling."

COMMERCIAL CREDIT DEALERS ARE *Successful* DEALERS



**COMMERCIAL
CREDIT
CORPORATION**

A service offered through subsidiaries of
Commercial Credit Company, Baltimore
... Capital and Surplus over \$125,000,000
... offices in principal cities of the United
States and Canada.

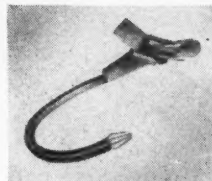
Kent-Moore Specials now available through



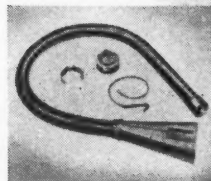
"HEAD-ON" CARBON BLASTER—Blast cleans combustion chambers without removing the cylinder heads. Restores engine horsepower!



LECTROTEST—New gas-per-mile gauge that hooks up to any car in less than 5 minutes!



MONOXIVENT FIXTURES—For efficient K-M underfloor exhaust eliminating systems.



MONOXIVENT, Jr.—Easy-to-install exhaust removal fixture for service stations, garages.



BRAKE BLEEDER—Services all cars and trucks. Eliminates aeration, saves brake fluid.



FROM EAST COAST TO WEST COAST

...wherever you are, there's a Kent-Moore Selected Distributor to serve you. So contact the nearest listed jobber headquarters location for complete information on Kent-Moore Special Service Equipment!

Farrer-Brown Company
494 Forest Avenue
Portland, Maine
(8 branch stores)

Hunt-Marquardt, Inc.
244 Brighton Avenue
Boston 34, Massachusetts
(5 branch stores)

Official Distributing Corp.
2227-33 Westchester Ave.
New York 61, N. Y.

Eveready Motor Equipment Co.
538 Washington Ave.
Brooklyn, New York

Chapin-Owen Company, Inc.
205 St. Paul Street
Rochester 4, New York

Onondaga Supply Co., Inc.
344 W. Genesee Street
Syracuse 1, New York
(6 branch stores)

H. D. Tayler Company
99-123 Oak Street
Buffalo 5, New York
(6 branch stores)

The Automotive Equip. Co., Inc.
123 Hudson Street
Newark 4, New Jersey

Gaul Derr & Shearer Company
1601 Fairmount Avenue
Philadelphia 30, Pennsylvania
(6 branch stores)

E. S. Youse Company, Inc.
522 Chestnut Street
Reading, Pennsylvania
(18 branch stores)

Harrisburg Auto Parts Co.
48 N. Cameron Street
Harrisburg, Pennsylvania
(7 branch stores)

Pittsburgh Auto Equip. Co.
5808-10 Baum Boulevard
East Liberty Station
Pittsburgh 6, Pennsylvania
(18 branch stores)

Phelps-Roberts
1825 14th Street N.W.
Washington 9, D. C.

Pennsylvania Rubber & Supply Co.
2819-27 Prospect Ave.
Cleveland 15, Ohio
(18 branch stores)

Womwell Automotive Parts Co.
240 Clark
Lexington, Kentucky
(5 branch stores)

Service Equipment Selected Distributors Coast-to-Coast!

THIS is an announcement that we're proud to make . . . and one that you'll be glad to see. Because, actually, *you asked for it!* Yes, in order to meet your growing demands more promptly and more efficiently, the entire line of Kent-Moore Special Service Equipment is now being stocked, sold, and serviced by *selected* distributors coast-to-coast.

So take a good look at the line-up of Kent-Moore Service Equipment. At the amazing profit-producing "Head-On" Carbon Blaster. The new dual-purpose Lectrotest Gas-Per-Mile Gauge. The easy-to-use Automatic Transmission Hoists and Adapters. The univer-

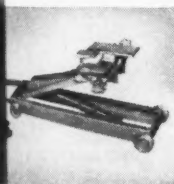
sally adaptable Brake Bleeder and Filler. And, of course, Monoxivent Exhaust Eliminating Systems.

Then look at the all-star line of Kent-Moore Equipment Distributors. A nationwide network of carefully selected jobber organizations with over 400 branch stores! And they're all ready to serve you now with . . .

LOCALIZED STOCKS—Complete equipment and replacement parts. No delays in service, no high freight charges!

PROMPT DELIVERY—Right from jobber to you. In many cases, you'll be able to use tomorrow the equipment you order today!

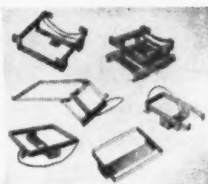
PERSONALIZED SERVICE—Competent, qualified personnel ready at all times to help you make the most of your Kent-Moore Special Service Equipment.



MODEL 27—AUTOMATIC TRANSMISSION HOIST
Easy to use, saves time, labor, manual handling.



MODEL 63—AUTOMATIC TRANSMISSION HOIST
For use with two post lifts. Safe, practical, convenient.



HOIST ADAPTERS—Hydra-Matic, Dynaflo, Ford and Merc-O-Matic, Ultramatic, and Studebaker Automatic.

KENT-MOORE ORGANIZATION, INC.

Engineers and Manufacturers of Special Service Tools and Equipment
5-105 GENERAL MOTORS BLDG. • DETROIT 2, MICHIGAN

Ozburn Crow and Yantis Co.
P. O. Box 429
Memphis, Tennessee
(102 branch stores)

Automobile Equipment Co.
623 E. Congress
Detroit 26, Michigan
(14 branch stores)

The Gibson Company
433 N. Capitol Avenue
Indianapolis, Indiana
(8 branch stores)

Motive Parts Company of America, Inc.
2419 Indiana
Chicago, Illinois
(11 branch stores)

Autoquip Inc.
3815 N. 35th Street
Milwaukee, Wisconsin

Monark Supply Company
555 N. Seventh Street
Milwaukee, Wisconsin

Automotive Supply Co., Inc.
300 North Appleton Street
Appleton, Wisconsin

Pro Auto Parts, Inc.
954 Washington Avenue
Racine, Wisconsin

Juneau Supply Company
417-419 Jackson
Wausau, Wisconsin

Menzer Supply Company
1210 Michigan Avenue
Sheboygan, Wisconsin

Andrae Automotive, Inc.
945 E. Washington Ave.
Madison, Wisconsin

W. T. Flaherty & Son, Inc.
100-102 N. Jackson
Janesville, Wisconsin

Motor Parts & Equipment, Inc.
2nd and State Streets
LaCrosse, Wisconsin

Reinhard Brothers Co., Inc.
11-17 So. Ninth Street
Minneapolis, Minnesota
(7 branch stores)

Beck & Corbitt Company
1230 N. Main Street
St. Louis, Missouri

Sleg Company
500 Iowa Street
Davenport, Iowa
(85 branch stores)

Myers Motor Equipment Co.
1931 McGee Street
Kansas City, Missouri
(21 branch stores)

Straus-Frank Company
P.O. Box 600
301 South Flores St.
San Antonio, Texas
(6 branch stores)

Sidles Company
502 S. 19th Street
Omaha, Nebraska
(25 branch stores)

Hines Motor Supply Co.
14 North 30th Street B
Billings, Montana

Chanslor & Lyon Company
730 Polk
San Francisco 19, California
(22 branch stores)

85. Fluid Dispenser

The Gray Company, Inc.: A new low cost ATF dispenser delivers measured amounts of fluid at the touch of a button. It delivers one quart of fluid in six seconds. A built-in strainer assures clean fluid to the transmission to a special non-drip nozzle. The meter indicates how much fluid has been dis-

pensed. It operates on a minimum of 50 pounds air pressure and is designed to operate in open top or bung-type drums. The 7-ft. hose reaches all fill holes.

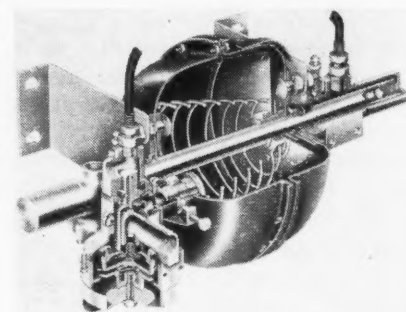
86. Arc Welder

Miller Electric Mfg. Company: Designed and built on the same principles and with the same arc

flexibility as the large Miller industrial type welders, the Model "44" is designed for use in the small shop. It has continuous current adjustment, two current welding ranges, and power supply is 110 or 200 volts, 50/60 AC current. An outlet box at the back of the cabinet makes it possible to connect from one line voltage to the other. The cabinet measures 13 in. x 13 in. x 33 in. and the unit weighs 156 pounds.

87. Power Brakes

Borg-Warner Service Parts Company: Borg-Warner is offering a complete line of power brake equipment for both passenger cars and commercial vehicles. As the source of power, the brakes utilize the natural vacuum which is pres-



ent in the intake manifold. By means of Borg-Warner installation kits, existing brake systems can be readily converted to utilize vacuum power to greater safety and increased braking demands.

88. Seat Covers

The Hinson Mfg. Company: With the nine corner swatches contained in the new Hinson display, a dealer can demonstrate and sell—right on the customer's own car—any of the 66,000 possible size, material and color variations in the complete Hinson line. Each swatch is marked with price and ordering information. The manufacturer backs up this display method of selling colors with a fast service program. The company states that individually made custom tailored seat covers are shipped within eight to seventy-two hours from receipt of the order. Ready-made styles are immediately available from the Hinson jobber.

(Continued on page 188)

GENERATE *Sales* REGULATE *Inventory* THIS *Profitable* WAY

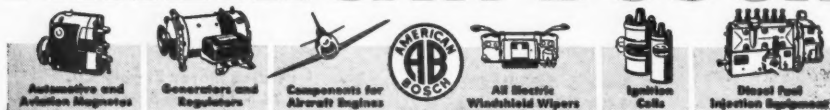


Most every car can be handled with this "3 for ALL" Generator Regulator Kit! It's complete with replacement data and installation instructions in a shipping container that converts to an attractive counter display. Use it to keep service sales UP and inventory DOWN.

The progressively improved performance of American Bosch Generator Regulators has been demonstrated in millions of these precision units used as original equipment. Here's the best Regulator money can buy—longer life and more permanent stability—yet priced right for replacement volume. Ask your Jobber about the "3 for ALL" KIT. American Bosch Corporation, Springfield 7, Massachusetts.



AMERICAN BOSCH



NEW!

UTILITY!

Here's why customers stay with you when you sell Sunoco Products!

H.D. DYNALUBE

Fights engine wear from sub-zero cold to hottest engine heats!



It lubricates completely when the temperature's low



Up to the hottest going any car will ever know

New Heavy-duty Dynalube is more than *twice* as tough as ordinary detergent motor oils. It fights wear better...longer...to keep your engine NEW.

Switch to Sunoco DYNALUBE the long-mileage motor oil!

SUN OIL COMPANY





"SCOTCH" REG. U.S. PAT. OFF. Pressure-Sensitive Tape No. 471
BRAND

**Needs no drying time...
out-wears other markings 5 to 1!**

"TAKE A LOOK at a real job of marking! We did it with tape—and we did it in a hurry, without interrupting our daily business.

"Tough plastic-backed 'Scotch' Pressure-Sensitive Tape # 471 sticks at a touch. Needs no special applying equipment, no drying time.

"And it stands up under the heaviest traffic without wilting or losing color—is absolutely unaffected by oils, greases, alkalis, water, salts and common solvents. We've found it gives us five times more service than ordinary marking materials!"



Write today for complete information. Address Dept. MA-13, Minnesota Mining & Mfg. Co., St. Paul 6, Minn.

**DO BETTER, FASTER WORK
WITH THE COMPLETE LINE
OF 3M REFINISH PRODUCTS**



Made in U.S.A. by Minnesota Mining & Mfg. Co., St. Paul 6, Minn.—also makers of "Scotch" Sound Recording Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives. General Export: 122 E. 42nd St., New York 17, N. Y. In Canada: London, Ont., Can.

ASIdeas . . .

Continued from Page 186

89. Cleaning Units

Graymills Corp.: Strong, whirlpool-like agitation of cold cleaning solvents loosens and removes dirt, oil, grease and chips from parts placed in the new Whirl Agitor Cleaning Units. Parts are placed inside the heavy gage steel tank, in a basket or heavy steel rack. The solvent is swirled in a powerful vortex, in, on, and around the parts, cleaning them automatically while the operator is free to handle other work. An electric motor drives the V-belt and the vaned impeller for the turbulent action of the solvent.



90. 6-12 Volt Chargers

Willard Storage Battery Co.: A complete new line of battery chargers is designed to meet the demand created by the use of 12-volt automotive batteries, has been introduced by Willard. Anticipating a need for this service, the manufacturer offers 6 new 6-12 volt chargers, with a wide range in output, style, size, facilities and price.

91. Oil Seal Stocks

National Motor Bearing Company, Inc.: Grease seals for 1952 cars as well as other late model popular automobiles are now available. Designated as Stock #5511, it includes 114 front and

(Continued on page 190)

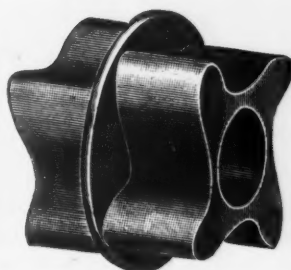


TROUBLE SHOOTERS FOR THE SERVICE FIELD

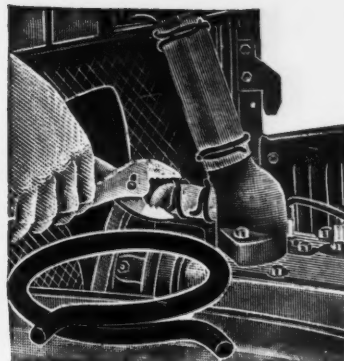
Champ-Items have been solving Service problems for twenty-four years. If you need a trouble shooter look in the new Champ-Items Catalog No. 53 — now ready. We will mail you a copy if you request one on your letter — or bill head. Many new items featured.

ORDER FROM YOUR JOBBER

NEW!



U. S. PAT. NO. 2,530,522



U. S. PAT. NO. 2,180,271

No. 640 Rotary Lock Repair Kit Assortment

For Chrysler, Dodge, De Soto, Plymouth, Nash, Studebaker, Packard and Mack Trucks. Replaces worn Rotors and Shafts on Rotary Type Door Locks in 10 minutes without removal of original lock or car upholstery.

List \$1.85 per Kit.

No. 656 Self-Tightening Hose Clamp Assortment

for all cars and trucks. For Radiator, Heater and Defroster connections. Just squeeze the ends with pliers and release. Exerts everlasting pressure. Never needs retightening. Spring tension maintains perfect seal. Will not cut thru hose. Color coded for size. 7 sizes — 15/16" to 2 1/4".

List from 10¢ to 20¢ each.



CHAMP-ITEMS, INC.

6191 Maple Ave.

St. Louis 14, Mo.

HOTTEST NEWS IN THE SHOP! the 60 SECOND HARBIL Paint Shaker



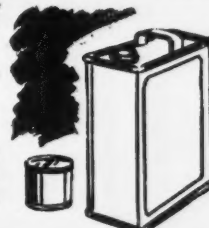
✓ NOW! MIX, COLOR MATCH ALL AUTO FINISHES
✓ BETTER AND QUICKER . . . BY MACHINE!

A spectacular new paint mixing machine that saves auto finishing time and cuts costs! Mixes, color matches, rejuvenates old paints with infinite accuracy! Gives perfect free flowing consistency to your brush or gun. Its vigorous shaking action blends any finish, or makes old paints fresh again—in just 60 seconds! Saves man hours. Eliminates tedious, time wasting hand mixing—and does it better, by machine! The Harbil HB-6 is a precision, laboratory tested machine built by the world's largest exclusive maker of paint shakers. Velvet smooth, quiet performance, needs no installation. Gives better paint jobs at bigger profits!

\$99.50*
F.O.B. Chicago

FOR ROUND, RECTANGULAR CANS

from 1/4 pts. to Imperial gallon. Holds either a rectangular gal., Imperial gal., U.S. gal., or U.S. quart . . . OR . . . 2 pts., three 1/2 pts., or four 1/4 pts. at one time.



*Prices subject to change without notice.

WRITE NOW FOR FREE ILLUSTRATED BROCHURE TO DEPT. MA-1

HARBIL MFG. COMPANY 325 West Ohio Street, Chicago 10, Illinois

rear wheel seals for late model cars including 1952 models and an enameled steel cabinet with a sales message on the front is supplied at no extra charge. The cabinet has two sliding doors and ample room for bearings and additional seal stock. Inter-Change and catalog data is supplied. A smaller stock is also available.

92. Green Sealer

The Sherwin-Williams Co.: "Opex Glamour Green Sealer" is a new addition to the Sherwin-Williams line, formulated especially to overcome touch-up problems in green automotive finishes. In transparent lacquer spot repairs, this new material, which is green in color, is claimed to en-

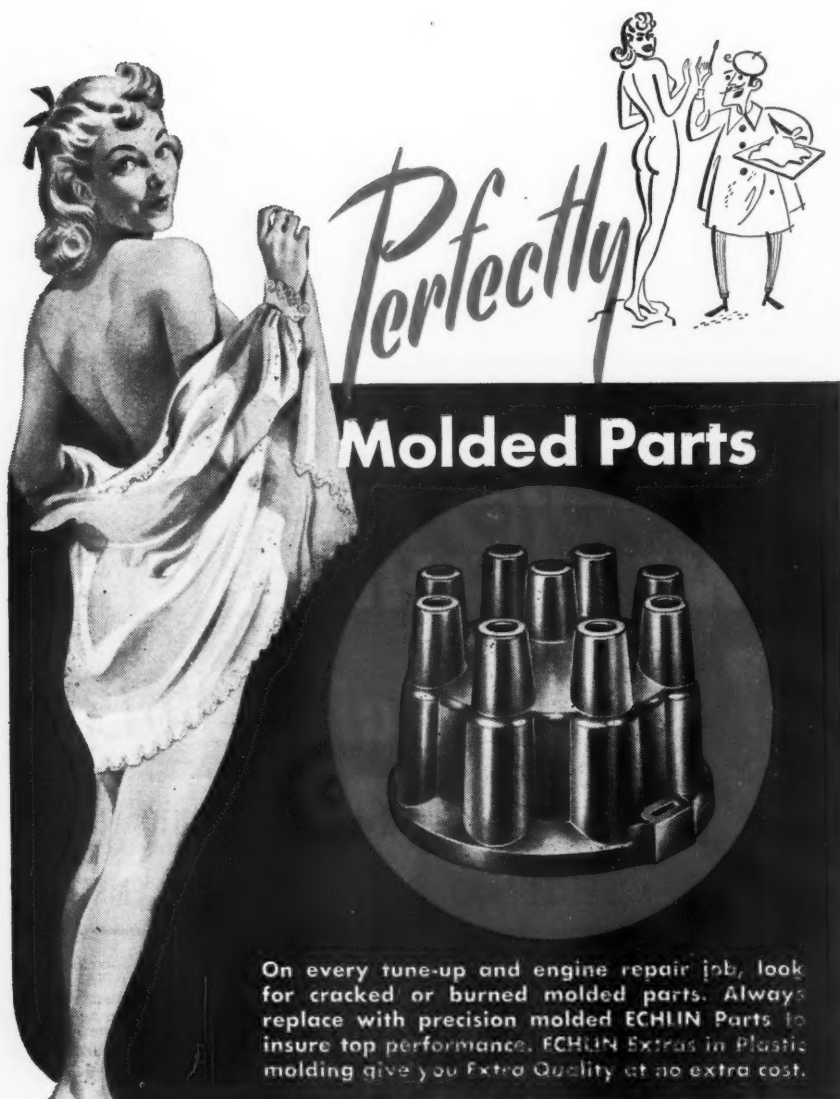
able finishers to match coats easily in original depth and richness of color. It seals in the undercoat and holds out the lacquer, giving maximum bond between old coats and new.

93. Brake Sets

National Brake Block Corp.: A newly designed, special engineered brake lining set is being used principally by light fleets, taxis and heavy duty users of brake lining. Known as the S-E set, it is the combination of a fully molded segment and a newly developed fully molded wire back block segment. This frictional combination is said to result in a smooth acting way which renders soft, sure stops under strenuous braking conditions. It is also said to render long life brake lining service.

94. Power Take-Off

Neapco Products, Inc.: The new Neapco Power Take-Off Joint Assortment furnishes any one of 90 different joint combinations. End



Perfectly Molded Parts

On every tune-up and engine repair job, look for cracked or burned molded parts. Always replace with precision molded ECHLIN Parts to insure top performance. ECHLIN Extras in Plastic molding give you Extra Quality at no extra cost.



ECHLIN *Ignition*

PRODUCT OF

ECHLIN

CONTACTS
 COILS - CONDENSERS
 & OTHER AUTOMOTIVE
 ELECTRICAL PARTS

ECHLIN MANUFACTURING COMPANY • DEPT. MA, 220 EAST ST., NEW HAVEN 5, CONN.



yokes are both round and square bore with sizes up to 1 1/4 inch in diameter. Journal assemblies are available with both plain and needle bearings.

95. Control Handle

Aro Equipment Corp.: The Aro "Du-All" control handle is adaptable to all makes of air-operated chassis pumps. It has a pressure boosting feature for hard-to-crack fittings and is said to give added power to low ratio chassis pumps. One pull of the trigger passes grease at line pressure for normal
 (Continued on page 192)



You Can Help Prevent This!



Every driver is a

ready prospect for the WICO Autostop!

Many drivers, unfamiliar with modern transmissions, find themselves in dangerous situations when they forget that their cars always are "in gear"!

This presents you with both a responsibility and an opportunity. You can meet your responsibility for your customers' safety and make the most of an opportunity for additional profit by selling the Wico Autostop.

A car equipped with a Wico Autostop stays put while the driver waits for the light to change. It just can't creep or roll backward or forward *even when a stop is made on a hill.*

Suppose *you* drive with a Wico Autostop. You brake to a stop as usual, and touch the magic switch on the gearshift or selector lever. The car stays put! When you're ready to go, step on the gas and the brakes release automatically.

You don't have to keep your foot on the brake. And there's no need for riding clutch or accelerator.

Practically every car owner is a prospect for a Wico Autostop. Here is a brand new opportunity for you to sell a profitable item—not a gadget, but a real necessity. And one demonstration can make the sale. Write us *now* about the MONEY-SAVING DEMONSTRATOR OFFER that makes it easy to show your customers *all* the Autostop advantages.

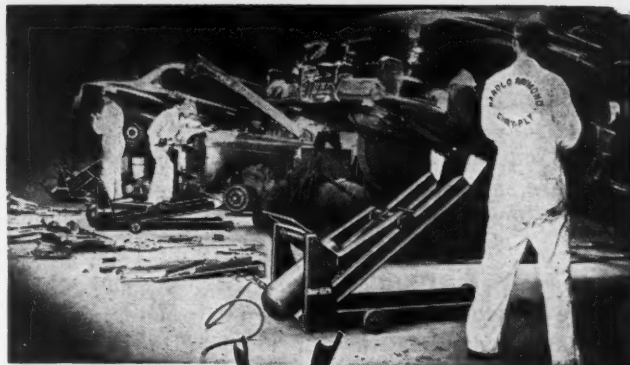
TO SHOW 'EM IS TO SELL 'EM!

Each Wico Autostop kit contains complete illustrated instructions. Average installation time: 1½ hours.



Manufacturers of Magnetos and the "Puff-a-lite" Automobile Lighter

WICO ELECTRIC CO., West Springfield, Mass.



Pat. No. 2230250

BAY LIFT

PORTABLE-PNEUMATIC

Bay-Lift Saves and Pays in Many Ways



Mr. G.E. Moothart, Gen. Mgr. of Harold Raymond, Inc., Chrysler-Plymouth dealers of Compton, California writes...

"We certainly are pleased with the six Bay-Lifts we recently installed in our body and fender departments. It is hard to see how we handled the volume through these departments without Bay-Lifts. They are the means of additional profits to our company and our men have expressed their appreciation for them. In our estimation Bay-Lifts are a *MUST* for efficiency in time-saving operation."

EASY TO USE AND SAFE

Moved easily as a jack. Used in or out-of-doors by simply attaching to air hose. Lifts either end of any car with safety. Load is supported by two sets of lifting arms, anchored at 4 points, which will raise maximum load to any height with steady action at correct angle, minimizing stress and strain. Equipped with automatic safety lock. Weight of suspended load, distributed equally to all parts of the bottom frame, eliminates possibility of tipping or falling "off balance".

SCIENTIFICALLY ENGINEERED
TO INSURE ABSOLUTE
SAFETY

See The BAY-LIFT Demonstration

BOOTHS 118-119-120 at the N.A.D.A. Show

Feb. 14-18 San Francisco

Write Today For Information...



BAY MANUFACTURING COMPANY

BOX 578 — TORRANCE, CALIFORNIA

NEW YORK OVERSEAS DIVISION, 276 WEST 43RD ST. NEW YORK 36, N. Y.

lubrication. For touch fittings, operator squeezes the trigger several times and each squeeze builds up pressure, maximum pressure being 12,000 pounds.

96. Slow Chargers

The Associated Equipment Corp.: A complete line of slow chargers in a full re-sale program have been announced. All models

are equipped with automatic re-setting, overload circuit breaker protection, steel cases, full-wave selenium rectifiers, and are engineered for twenty-four hour a day service. Largest of the new tapering slow chargers is the Hartman Model S-20 with 20 amp. output. It will give an adequate charge in only a few minutes, sufficient to start a motor, or will charge an

average battery in two to three hours.

97. Weatherstrip

Van Cleef Bros., Inc. Div., Johns-Manville: Rub'R-Strip is a molded sponge rubber weatherstrip which is said to have a fine even texture with a tough, smooth skin. It fits snugly around the car doors and seals out water, dust, dirt and cold drafts. It is available in three sizes and meets auto repair and paint shop requirements for replacement of original equipment.

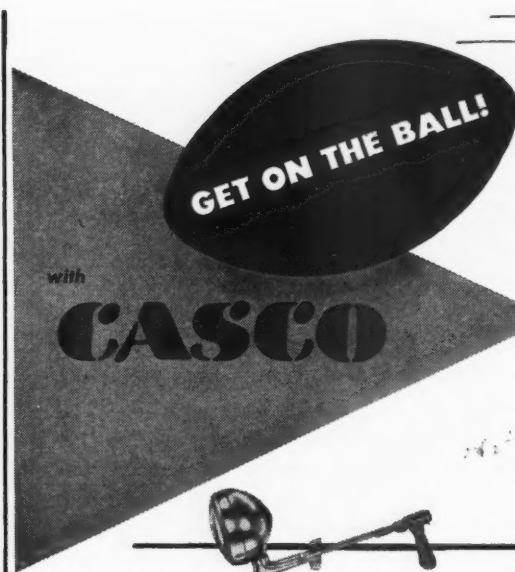
98. Oil Additive

The Wilson Company: Motor Moly is a molybdenum base oil additive that is said to "plate" the vital moving parts of the engine and improve performance by reducing friction. It deposits an even metallic film of molybdenum disulphide, a metallic lubricant, on all internal metal surfaces. This compound is said to adhere to metal, thus reducing friction even on cold starts. This product is available in eight ounce cans and in a quart size.

99. Idler Arm


Moog Industries, Inc.: The Moog K-230 Idler Arm has been introduced for use on 1952 Fords. The manufacturer states that studs can be replaced separately without removing the arm with this unit. The design permits rolled threads which insure long wear. It is said to have a precision bearing surface and give a perfect fit.

(Continued on page 194)



GET ON THE BALL!

with
CASCO




CASCO SPOTLIGHTS
FINEST MADE!
INNER CONTROLLED!

Powerful sealed-beam light turns in a complete circle. Smart, streamlined design . . . heavily chrome-plated.

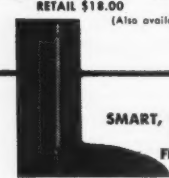
JUNIOR: No. S-40 Thru-the-Post No. S-35 Thru-the-Door RETAIL \$18.00	STANDARD: No. S-41 Thru-the-Post No. S-36 Thru-the-Door RETAIL \$18.50
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(Also available for 12 volts)



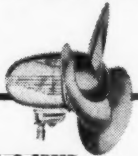
FAN HUB
REPLACEMENT ASSEMBLY
TREMENDOUS NEW MARKET EVERY DAY

Worn out fans of every make are replaced daily with the reliable CASCO Fan Hub Assembly. Merchandising package includes 6 Fan Hub Assemblies—each 3 mounted on display card. No. F-14 **RETAIL \$2.05**



SMART, NEW, LUCITE ILLUMINATED FENDER GUIDE


Universal Thru-The-Fender mounting. Fully adjustable for all cars. Light in mounting base illuminates full length of rod. Extra brilliant at top.
Display card FREE with each 6. Order No. A-31. **RETAIL \$2.75**



CASCO 2-SPEED 6" RUBBER-BLADED AUTO FAN
QUIET! DEPENDABLE!


Fans have chrome-plated metal trim and swivel arm. Motor case is die-cast, has universal mounting brackets for quick, easy installation.

No. F-11 (6 volt)	RETAIL \$8.75
No. F-12 (12 volt)	RETAIL \$9.75



CASCO "SPOTLIGHT MIRROR" FITS ALL SPOTLIGHTS

Double thick, polished bevel glass encased in heavy gauge brass, chrome plated shell, swivelled on ball and socket to die cast mounting arm. Attaches to back shell of spotlight. No. S-10 **RETAIL \$3.00**



NEW! CASCO ON-THU-POST SPOTLIGHT
MOUNTS COMPLETELY ON OUTSIDE OF CAR. CONTROLLED BY DASH SWITCH

This chrome beauty has all the tight power and maneuverability of more expensive spots—yet can be installed in minutes. No. S-240 **RETAIL \$14.00**
(Also available for 12 volts)

Dependable Products for **CASCO** Over a Quarter Century

Casco Products Corp., Bridgeport 2, Connecticut



TRY THIS RED OXIDE

FOR FASTER DRYING!

FROM ACME'S LABORATORY:

WHAT A DISCOVERY!

brand new, tested and proved primer-surfacer is now ready for you. It's Acme 550... the very last word in quick, uniform drying and easy sanding!



FROM ACME JOBBERS:

WHAT A SELLER!

The painters we call on are enthusiastic about this new primer-surfacer. All over the country — painters are saying it's the number you can count on.



FROM PAINTERS EVERYWHERE:

WHAT A HELPER!

Here's a real paint shop "helper" that saves time and money. It's the fastest drying primer-surfacer yet. And sanding — wet or dry — is amazingly easy... dusts off without gumming!



The
ACME WAY
Makes
PAINTING PAY

NEW
IMPROVED

OTHER FEATURES OF ACME 550:

- Excellent filling. • Smooth flowing. • Perfect feather-edging. • Excellent color hold out. • Economical 2 to 1 reduction.

Call your Acme jobber today. Let him show you how the new, improved Acme 550 Red Oxide Primer-Surfacer can save you valuable time and money.

ACME AUTOMOTIVE FINISHES
ACME QUALITY PAINTS, INC.
Detroit 11, Michigan

ACME
550 RED OXIDE
PRIMER-SURFACER

100. Piston Rings

McQuay-Norris Mfg. Co.: McQuay-Norris leak proof piston rings are said to be especially made for the "tough" jobs and feature the new "400" oil ring, which has chrome-armored steel segments. This set also features the "Duo" compression oil ring and the "aviation" fire ring. Both

of these rings are aluminized for protection against acid action and to assure quick seating.

101. Shop Equipment

Lempco Products, Inc.: A complete line of automotive shop equipment is featured by this company. Included in these are a 40-ton hydraulic press, model

MKG crankcase grinder with capacities for 22 x 50 in., 22 x 62 in., the Model DH heavy duty hydraulic brake drum lathe with a capacity of 16 x 40 in., the Model 505 brake perfecter with a capacity of 7½ in. x 24 in., a piston vise, a pin vise, the Model 200A speed master wet reaming and honing machine and many other items of shop equipment.

102. Battery Charger

Connecticut Telephone & Electric Corp.: A battery charger which mounts inconspicuously underneath the dashboard of any car so as to be available at all times is known as the Connecticut Dash-Charge. It measures 8½ inches x 4 inches x 2¾ inches and operates from a standard 110-120 volt outlet into which the extension cord is plugged. Batteries half run down can be restored to full charge in about 12 hours with the new charger. Batteries more than half down can be restored to full power in a proportionately longer time.

103. Oil Filters

Hastings Mfg. Co.: An expanded cartridge line plus a new filter for Plymouths and Chevrolets has been announced by the Hastings. It is described as a new, large capacity, heavy duty filter, especially designed for 1946 through 1952 Chevrolet and Plymouth passenger cars. A replacement filter for these numbers is installed with special brackets. No drilling is necessary.

(Continued on page 196)



Here's what makes this mike great!

- READ-RITE is easier to read
- READ-RITE is faster to read
- READ-RITE prevents costly errors: the reading is in the window, plain as the nose on your face
- READ-RITE helps speed precision work in the auto repair shop

Central Read-Rite Micrometers — with the automatic window counters — are available in two polished frame models, 0 to 1" (illustrated) and 1" to 2", and six black enameled frame models with a combined range of 0 to 6". For full details, see your jobber or write for catalog.

THE CENTRAL TOOL COMPANY
462 WELLINGTON AVENUE
CRANSTON 10, R. I., U. S. A.

FOR HALF A CENTURY
SPECIALISTS IN VINE MICROMETERS

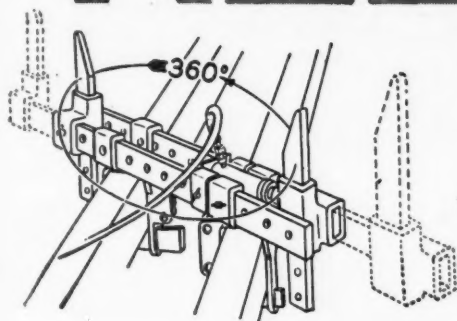
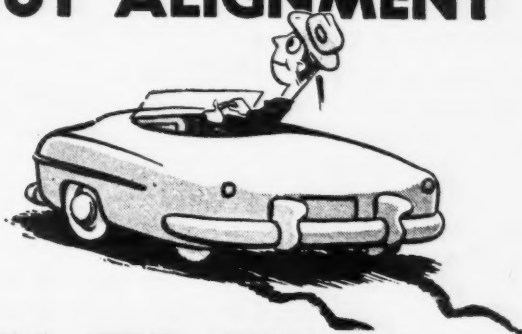
CENTRAL
Certified
Accuracy
MICROMETERS



IT'S GOOD NEWS ABOUT ALIGNMENT

HELP

IS ON IT'S WAY™



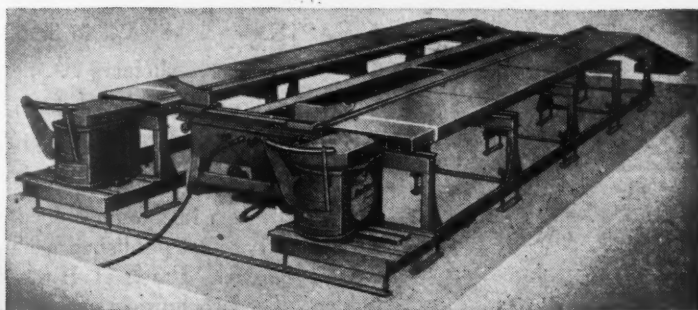
NOW you can straighten today's difficult frames and restore basic body alignment

WITH THE NEW EASY TO OPERATE

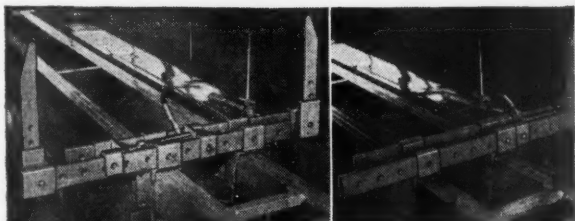
Bee-Liner 360

THE BEE-LINER 360 IS THE ANSWER TO YESTERDAY'S ALIGNMENT TROUBLES AND THE ADDED PROBLEMS OF TODAY'S FRAME BODY CONSTRUCTION

- Jack always remains in a low position out of the way, always in line with push or pull, yet tools provide maximum versatility in operating height.
- Angles of push, push and hold, pull, pull and hold, double push, double pull, spread and squeeze are available in any direction in a 360° circle.
- Ample amount of push or pull without disturbing set-up.
- Capable of performing every conceivable frame straightening operation.



The Bee-Liner 360 unique design makes it exceptionally versatile. The practically unlimited combination of hook-ups insure a more efficient handling of all frame straightening operations, faster. With full 360° angle of hook-up, the jack is always in line with the push or pull. Jack operates below all obstructions, out of the way. Frame press and knee adjustment insure proper working height. Set-up may be pinned and held while jack is reset for further push. The Bee-Liner 360 for the first time makes it possible to push, push and hold, pull, pull and hold, double push, double pull, spread and squeeze in any of the 360 degree angles.



for every frame straightening operation.

**SQUEEZE
SPREAD
STRETCH
STRETCH-PULL
DOUBLE PUSH
ANGLE PUSH
PUSH
DIAMOND**

MAIL TODAY FOR LITERATURE

NAME _____
ADDRESS _____
CITY _____ STATE _____

Bee-Line co.

DAVENPORT, IOWA

U.S.A.

104. Parts Testers

Magnaflux Corp.: The Type DR Magnaflux Units have been especially designed to provide equipment for automotive overhaul work and for inspection of small parts and tools. The units can be equipped with a Magnaglo hood to permit use of the most sensitive and rapid Magnaglo wet-alternating current methods. They are

said to be suitable for a variety of rough or machined parts. During engine overhaul and overhaul of component equipment parts, they are used to inspect for fatigue cracks and similar defects. They may also be used for parts inspection, for grinding and heat treating cracking and various other surface discontinuities. The manufacturer states that Magna-

glo is especially adapted to examination of parts during overhaul.

105. Island Units

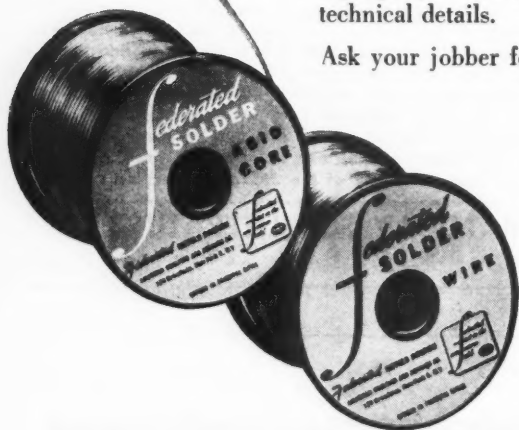
John Wood Company — Bennett Pump Div.: Eco Islanders with the Spira-Coil hose retraction reels for air, water and light service, are featured by this company. The units fit into a space ordinarily unused or occupied by island lights alone, yet they provide as many as three services—air, water and light. Models are available with the Eco Automatic Tireflator, pylon-fluorescent light or light reflector unit, cash-box, utility desk or air, water service merchandising sign.

HOW TO SOLDER... for Bigger Profits

1. CHOOSE the correct solder for the specific job at hand.
2. CLEAN all work to be soldered.
3. CHOOSE the right soldering iron.
4. PREPARE the soldering equipment for use.
5. PRE-TIN surfaces to be soldered.
6. FASTEN or hold work so that it is rigid.
7. APPLY heat to surfaces . . . never to solder.
8. DO NOT use too much solder.
9. USE Federated Solder . . . the best solder you can buy.

To help you with your everyday soldering, Federated has just published a handy 16-page, 2-color booklet "Practical Hints on How To Solder." The brochure is packed full of soldering tips, yet it is brief and free of burdensome technical details.

Ask your jobber for your *free* copies TODAY.



Federated Metals Division



AMERICAN SMELTING AND REFINING COMPANY • 120 BROADWAY, NEW YORK 5, N. Y.



106. Carbon Remover

The Curran Corp.: Gunk Hydro-Seal Decarbonizer is a metal parts cleaner and paint stripper which is said to be fast acting and easy to use. It removes carbon, gums, and sludge from engine parts and accessories during overhaul. It is claimed to be suitable for cleaning and reconditioning dies, tools, nozzles, metering valves and other hard-to-get intricate mechanisms. The manufacturer states that it can be used without harmful effect on aluminum alloys, zinc die castings and other soft metals. The 60-gallon size kit with dipping screen, is designed to be a complete "liquid tool" which will have many uses in every shop.

(Continued on page 198)

ELIMINATE "Dry Starts"

Add the NEW

MAGIC LUBRICANT

PROLONG Engine Life

MORE MILES PER GALLON

Motor Moly

it's **"PLATIZOLED"** only \$1.00

Plate every friction and pressure surface of your engine with MoS₂, the finest lubricant known.

**NOW AVAILABLE TO ALL CAR OWNERS—
ACTS IMMEDIATELY TO PROVIDE:**

- LESS FRICTION =**
- BETTER PERFORMANCE =**
- MORE GAS MILEAGE =**
- MORE POWER AND SPEED**

**EXCELLENT FOR GIVING MORE MILES PER GALLON
AND BETTER ENGINE PERFORMANCE BY —**

1. Reducing frictional drag and wear: — Slipperiest substance known.
2. Lowering operating temperatures: — Smoother action and less friction means less heat.
3. Safely breaking in new or rebuilt motors: — Absolute coating protection.
4. Producing smoother motor action with higher compression: — Due to better lubrication.
5. Protecting bearings from scoring or seizure in the event of accidental loss of oil or radiator water: — Because of its tenacity to adhere to metal.

GUARANTEED TO coat all the internal metal moving parts with molybdenum disulphide if used as directed. Absolutely stable under all driving conditions — gives engine full lubrication at all times.

A SUPERIOR ADDITIVE BECAUSE IT'S PLATIZOLED
Retail Price, only \$1.00 per 8 oz. can. Also available in quart size economy can \$3.25.



"Get more pep — less gas consumption."



***A NEW PLATING ACTION**

deposits an even, more rugged metallic film of the miracle lubricant, molybdenum disulphide (MoS₂), on all internal metal surfaces. Constant friction reduction — 45% out of every gasoline dollar is wasted on friction. Motor Moly minimizes friction loss at all times. No more "dry starts" — 90% of all engine wear occurs in starting, before crankcase oil has a chance to circulate and lubricate. Motor Moly eliminates these wear-producing "dry starts" by providing the necessary lubrication during critical warm-up period.



ANOTHER WILCO PRODUCT
The WILSON Company
957 Commonwealth Avenue, Boston, Mass.

107. Piston Service

The Ramsey Corp.: "Lubri-Knurl" is a new method of knurling pistons developed to correct collapsed pistons more effectively. The machine which performs this operation is available to Ramsey jobbers by special arrangement with the Ramsey Corporation. The feature of this method is the fact

that the pistons are knurled on the inside as well as the outside, in order to increase piston diameter. The "Lubri-Knurl" method is said to provide improved lubrication during early stages after an overhaul. The pattern on the pistons created by the machine, produces small "oil trenches" which are said to accumulate

greater quantities of oil, thereby providing improved cylinder wall lubrication.

108. Fire Extinguisher

Pyrene Mfg. Company: A push-button fire extinguisher for automobile and home use has been introduced by Pyrene. It is in the pint size and fits into the glove compartment. The extinguisher, which is constructed of stainless steel shell and red plastic head, discharges a 25-ft. stream of liquid by air pressure at the touch of a finger on the push-button. When the button is released there is a positive shut-off. The extinguishers, which are delivered in cartons of three, come in a red wall bracket and each unit is packaged individually in a box which converts to a display.

109. Spring Compressor

K-D Manufacturing Company: Latest Ford, Lincoln and Chrysler overhead valve engines are serviced with the K-D 380 Valve Spring Compressor. This tool services cars, trucks and tractors—both L-head and valve-in-head engines. One pair of straight jaws and one pair of offset jaws are furnished with every tool.

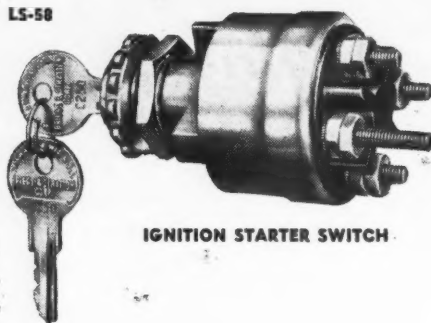
110. Cleaner-Polish

Simoniz Company: Bodysheen is a new one-step cleaner polish backed by Simoniz, which is said to give the car a quick bright shine in one operation. It leaves no smeary "film," the manufacturer states and removes traffic film, dirt, dust and road scum. It is said to contain no acids, harmful chemicals or abrasives.

(Continued on page 200)

NEW SWITCHES and CONNECTORS For AUTOMOBILES, TRUCKS and TRAILERS

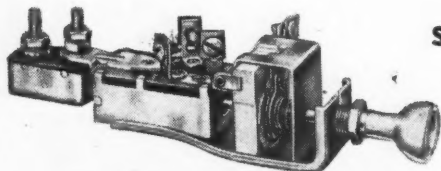
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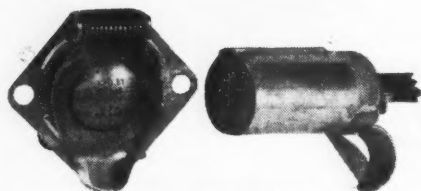
IGNITION STARTER SWITCH

IN LEADING CARS

During the month of December 1952, more than 200,000 of America's leading cars were equipped with Pollak switches, designed and manufactured to the same high standards of quality which have been traditional with Pollak since 1909.



1704 HEADLIGHT SWITCH



99 7-WAY CONNECTOR

SWITCHES and CONNECTORS

Backup Light	Momentary
Defroster	Pillar
Dimmer	Push Pull
Dome Light	Relays—Headlight
Door	Relays—Horn
Fog Light	Starter—Ignition
Gang	Stop Light
Heater	Toggle
Headlight	Trailer
Hydraulic	Connectors
110V Switches	Truck
110V Connectors	Voltage Reducer
Ignition Lock	

Send for complete catalog

Remember POLLAK

Quality Automotive Products Since 1909

JOSEPH POLLAK CORPORATION

75-99 Freeport Street, Dorchester Dist., Boston 22, Massachusetts, U. S. A.

EXPORT DIVISION: A. J. Alsdorf Corporation

221 N. LaSalle Street, Chicago, Illinois, U.S.A.



"Big sale on auto horns today!"

No "weather-worries" for me. I use
"Scotch" Masking Tape No. 202
...it's WEATHER-BALANCED!



WHEN IT'S HOT . . . "Scotch" Masking Tape has easy unwind from roll, won't leave adhesive on the job.



WHEN IT'S COLD . . . "Scotch" Masking Tape stays flexible, won't harden and fall off the job.



WHEN IT'S DAMP . . . "Scotch" Masking Tape stays in perfect working condition—is not affected by moisture—won't become limp and hard to handle.



WHEN IT'S DRY . . . "Scotch" Masking Tape won't curl or shrink, adhesive won't dry out and fall from job.



"Speed counts in my business. I need a masking tape that's workable rain or shine—dependable in hot or cold weather. And that's *exactly* why I use "Scotch" Brand Masking Tape No. 202. I've learned that this *weather-balanced* tape masks perfectly any time—any day in the year!"

★ ★ ★

And for High Heat Masking, use "Scotch" Masking Tape No. 216

For Gas-Fired Ovens! "Scotch" Masking Tape No. 216 stays pliable—won't dry out under gas heat. Has instant adhesion—stays on the job. **For Infra-Red Traveling Ovens!** "Scotch" Masking Tape No. 216 won't curl, lift or pull away under high temperature in infra-red ovens. **For Infra-Red Spot Units!** "Scotch" Masking Tape No. 216 protects better, yet removes easily even under concentrated force-drying.

Stock and use the complete line of 3M Refinish Products



Made in U.S.A. by Minnesota Mining & Mfg. Co., St. Paul 6, Minn.—also makers of "Scotch" Sound Recording Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-Slip Surfacing, "3M" Abrasives, "3M" Adhesives. General Export: 122 E. 42nd St., New York 17, N.Y. In Canada: London, Ont., Can.

111. Windowshades

Auto Ventshade Company: Ventshades are metal shades that fit over the side windows of automobiles. Serving as both sun shades and rain deflectors, they are designed to permit windows to be partially lowered in the heaviest rain, thus providing natural ventilation of the car and reducing fogged windows and wind-

shields. They are made for virtually all makes and models of cars except convertibles. Ventshades for sedans and coupes fit into the individual windows while those for hardtops are installed on the body of the car above the doors and run the full length of the top in one piece. They are made of highly polished stainless steel.

A cartoon illustration for Sludg-Master. A man in a suit holds a large can of Sludg-Master. A speech bubble from the can says "a SEMI-MAJOR OVERHAUL isn't necessary". Two mechanics are shown: one standing and one running away from a car with a sign that says "EXPENSE", "BILLS", and "REPAIRS". The can of Sludg-Master has a list of benefits: 1. DISSOLVES CARBON SLUDGE AND GUM, 2. ELIMINATES & PREVENTS SEVERE VALVE, 3. FREEZES & PREVENTS FLEXIBILITY, 4. DISSOLVES & PREVENTS WATER, 5. DISSOLVES & PREVENTS STARTING, 6. SAVES ON GAS AND OIL. Below the can are two circular logos: "CARE WILL SAVE YOUR CAR" and "GET IT FROM YOUR JOBBIN".

JUST SELL OR USE SLUDG-MASTER

Valve or ring jobs, because they come between general overhauls, are frequently referred to as semi-major operations. Regardless of their rank, they run into money, and it isn't uncommon for four or five of these jobs to be done between overhauls.

The majority of these semi-majors wouldn't be necessary if you took the time to explain to your customers exactly what Sludg-Master does. They'd appreciate your sound advice, and you'd find the invested time highly profitable to you.

Probably you've been a friend and booster of Sludg-Master (formerly Six Master) for years. And you know — from experience — that it dissolves carbon-sludge, gums and varnish; that it frees sticky valves and rings, and *keeps* them operating flexibly. But do you know how and why?

It's a really interesting story — one which your customers will thank you for telling them. And it's presented briefly and clearly in our new booklet: *Engine Deposits and How They Grow*, a copy of which is yours for the asking.

**NO FUSS NO MUSS
JUST POUR NO MORE**

Illustration of a Sludg-Master product can. Text on the can: "PRODUCTS WORK WHILE YOU RIDE", "Chemical Company Mfg. Chemists", "36 CROFTON ST. CAMBRIDGE, MASS.", "THE ELITE PARTNERS OF MOTOR EFFICIENCY".

112. Wall Chart

Duro Metal Products Co.: For the benefit of shops doing motor service and repair work, this firm now offers a new chart of manufacturer's recommendations on bolt tensions. These recommendations include factory specifications of foot-pounds tension for all the leading makes of cars and trucks, in replacing cylinder head bolts, main bearings, and connecting rod bearings.

113. Pressure-Purger

Choldun Mfg. Corp.: "On-The-Car" service helps to sell cooling system cleaning. The Choldun Pressure-Purger is designed to analyze and clean cooling systems while the customer watches. The mechanic can show him such things as defective gaskets, hoses, water pumps, etc. The machine is designed as a silent salesman for the cooling system cleaning service. Pyrex cylinders on top of the unit show the dirty water as it is flushed back and forth throughout the system. The filter trap screens out the dirt which is loosened by the hot chemical solution.



114. Radiator Hose

Gates Rubber Company: To give additional coverage for present curved hose dealers, and 99 per cent coverage with minimum stock of new dealers, this firm has developed a new flexible radiator hose called Vulco-Flex. This has a special spring support which rides free and is not anchored to

(Continued on page 204)

TRIED AND APPROVED

by **TIMKEN-DETROIT AXLE**

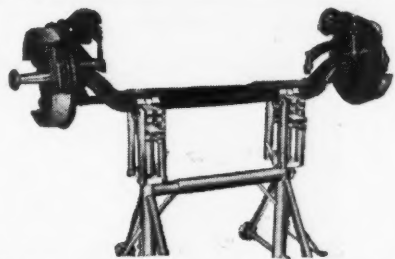
KRW'S NEW IMPROVED AXLE DOLLIE



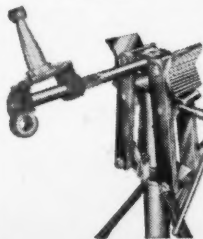
OUR THANKS TO TIMKEN
for field-testing the new, improved KRW axle dollie in their service department. Above is a model H-150-H Timken-Detroit axle at one stage of disassembly. Timken's service engineering manager writes that this dollie is in constant use and has the unanimous approval of Timken mechanics!

\$115⁹⁵

F. O. B. FACTORY



Timken FD-900 Front Axle mounted on dollie. Flat jaws are grooved horizontally for holding reamers, etc., grooved vertically for gripping round shafts.



Clamping jaws can be turned and locked in any of four different positions, 90° apart. Clamping jaws can hold many parts that are awkward or almost impossible to hold in a vise.

SWINGS AXLES OPEN FOR COMPLETE OVERHAUL

Your mechanics don't have to be "weight-lifters" to do a complete axle overhaul with this new, improved KRW Axle Dollie. It handles the largest truck or the smallest car axles equally well. A few turns with a speed wrench and the axle can be separated into easy working position (shown above). That way a complete axle overhaul can be done without once removing the axle from the dollie. Pays for itself in a few overhaul jobs.

- Welded tubular steel — rugged, yet lightweight.
- Portable — easily wheeled to or from car or truck.
- Scientifically designed working height.
- Handles front or rear axles, drive shafts, drive shaft housing, many other parts.

Order from Dept. 87. Prices subject to change without notice.

K. R. WILSON

215 MAIN STREET

BUFFALO 3, N. Y.

WORLD'S LARGEST MANUFACTURER OF GARAGE TOOLS AND EQUIPMENT

A Customers "Roll Call" with GROWING PAINS



They can afford any expensive cloth shop cover rental service but they use...

VACUUM GRIP Mechanic's "Wipeable" SHOP COVERS

**...for greater protection
at one fourth the cost!**

- Neoprene-nylon tops
- Welded by vulcanization in single sheet construction
- Heavy cushion — sponge non skid base protects against scratches, nicks, etc.
- 24 month guarantee

See us at Booth 150-151
NADA Show San Francisco,
Feb. 14-18.



VACUUM GRIP COVER CO., Inc.
53 Washburn St., Bridgeport 5, Conn.

Vacuum Grip Cover Co., Inc.
53 Washburn St., Bridgeport 5, Conn.
Gentlemen: Please ship us:

.....Fender Covers @ \$6.45 ea.
.....Seat Covers @ \$7.90 ea.

- ☐ C.O.D.
☐ Check Enc.
☐ Rated Firm

Firm Name

Address

IMPRINT OF FIRM NAME FREE

Trucks for '53

Continued from Page 64

Chevrolet . . .

A new 45 ampere generator is now standard equipment on both engines. Because of the higher voltage at the spark plugs, new moisture resistant covers are used on spark plug terminals to assure more positive starting.

Torque Action brakes are featured in all models except the heavier-duty trucks which have Twin Action brakes at the rear. The brakes utilize the momentum of the truck to assist stopping effort. Front brake area has been increased on some medium- and all heavy-duty models to provide greater durability.

Dodge . . .

have the $\frac{3}{4}$ and 1-ton model pickups.

Dual-primary type rear brakes on the 1, $1\frac{1}{2}$, 2, and $2\frac{1}{2}$ -ton models provide better braking action with reduced pedal pressure. Additionally, improved braking and better balance between front and rear brakes are obtained on $\frac{3}{4}$ through $2\frac{1}{2}$ -ton models by use of straight bore brake cylinders on front and rear.

Dodge tinted glass is available in all glass areas for all models. New heaters with increased output are available for owners who need them in colder climates.

**DUAL WHEEL DOLLY
DUAL WHEELS
REMOVED, REPLACED
QUICKLY—EASILY**

SAVE TIME
TEMPER
BACKACHE
SEND FOR LITERATURE
ALEXANDER-TAGG IND. INC.
Dept. E, Hatboro, Pa.

Hundreds of Parts for All Popular Cars & Trucks



They **FIT**
Exactly
They **RUN**
Perfectly
They **LAST**
Longer



Wohlert
CORPORATION
LANSING 5, MICHIGAN

**SAVE TIME!
Build PROFITS!**

**WIREMOLD
DEFROSTER
HOSE**



- ▶ Fits every make and model of car or truck
- ▶ Specified equipment on most makes of cars
- ▶ Easily bends 90° — 180°
- ▶ Resists cold—heat—oil—water
- ▶ Saves 50% storage space—6' lengths retract to 3' in package
- ▶ Wiremold quality at a competitive price

Installing Wiremold is simple and fast. This quality hose is light, clean, easy to cut and easy to handle! You can bend it double without kinking. It fits snug and tight, and it's very durable. Both you and your customers will like it better! Write today for full information.

**SPECIFY
WIREMOLD—
get the BEST
at NO
EXTRA
COST!**

The WIREMOLD Company
Makers of Wiremold Electrical Systems
Hartford 10, Connecticut

Willys

Continued from Page 59

Ana, Calif., and mounted on a custom built frame. The 90 hp Willys F head engine is used and several different gear ratios are available. Wheelbase is 101 in., height is 37 in., overall length is 162 in. Optional equipment includes a modified 135 hp Willys engine, floor shift, over-drive, and a removable canvas ore fibre-glass top.

The Aero Eagle is powered by the 90 hp Hurricane 6 F-head engine with a compression ratio of 7.6 to 1. The car has a wrap-around rear window and one-piece windshield.

Lloyd Joins Road Board

N.A.D.A. President J. Saxton Lloyd of Daytona Beach, Florida, has been appointed by Governor-elect Dan McCarthy to serve for a 4-year term as a member of the Florida State Road Board.

In his capacity as President of the National Automobile Dealers Association, Mr. Lloyd has spearheaded a national program designed to stimulate state and local action leading to solutions of problems existing throughout the nation because of inadequate highway and parking facilities.

TIME STOPS FOR NO ONE! BUT...
I CAN STOP WHEN I WANT, WITH
**SOUTHERN
FIBRE BLOCK**



SOUTHERN
FRICTION MATERIALS CO. - CHARLOTTE, N.C.

each of these
makes
your work

EASIER!



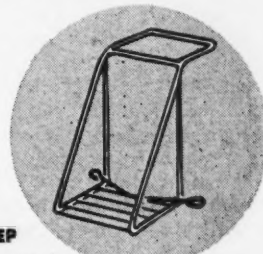
GEIGER CREEPER

Best thing yet
for rough floors . . . built "to take it"
. . . favorite with thousands of
mechanics and service station men.



GEIGER SEAT

So handy for bumping
fenders, adjusting brakes, etc. . . a
tool tray right below you, tool . . .
Amazingly popular with mechanics!



GEIGER STEP

Just hook it over front
truck tire, lift hood and go to work
on engine . . . a "natural" for specialists
on truck repairs!



All Geiger Creepers
and Seats are
equipped with the
famed Geiger-Knight
Casters . . . which
slide easily in ANY
direction—pivoting
on a dime!

*Write for
Free Catalog*

**GEIGER
PRODUCTS**

CLINTON PRODUCTS CO.
295 Tecumseh Road • Clinton, Michigan

*Here's the First
NEW idea in
plier design
in years...*

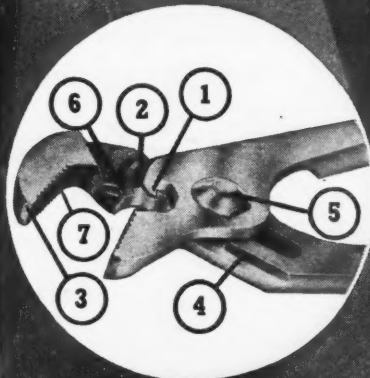
THE NEW No. 420

CHAN NEL LOCK

TRADE MARK

REG. U.S. PAT. OFF.

PLIER



1. Interlocking principle prevents slipping under any load. 2. New type wide base lugs cannot shear. 3. New nose design for gripping small objects. 4. Patented design of tension edge eliminates stress concentration at channels. 5. New interlocking design minimizes stress on joint bolt. 6. Precision machined interlocking surfaces result in perfect fit, distributing pressure evenly. 7. "Rite Angle" teeth guarantee maximum bite and minimum wear.

Here is a plier that will last for years! Channellock Pliers—made only by Champion DeArment Tool Co., Meadville, Pa.

Send for your Catalog today.

Channellock pliers are listed in the Yellow Pages of most Telephone Directories under "Tools"

THE PLIER DESIGN THAT OBSOLETE ALL OTHERS



Only **CHAMPION DeARMENT** makes

CHAN NEL LOCK

CHAMPION DeARMENT TOOL CO. • MEADVILLE, PA.

ASIdeas . . .

Continued from Page 200

the rubber. This feature is said to provide additional support to the hose and still allow the hose free to absorb vibration.

115. Testing Booklet

Allen Electric & Equipment Co.: What about servicing 1953 models with 12-volt systems? A brief pamphlet available from this company answers this question. Allen announces development of a complete line of equipment for testing and servicing all vehicles equipped with either a 6 or 12 volt system. The pamphlet describes and illustrates these testers.

116. Air Compressor

Brunner Mfg. Company: The Brunner "Du-Al" tank units are especially designed for the tire and truck road service business. They also have a wide range of other uses, the manufacturer states. They are designed for use on service trucks equipped with impact wrench, hydraulic-air operated jacks or lifts, air hammers, on the spot greasing equipment and ample air to pump up tires.

(Continued on page 206)

**KEN-TOOL
4-WAY RIM
WRENCHES**

They're built stronger to last longer... forged from only the highest quality steel... held to KEN-TOOL'S rigid standards. They're "Jed Designed" to do tough jobs quicker... Best by Test!

See KEN-TOOL'S Complete Line At Your Jobber!

KEN-TOOL Mfg. Co.
Three S. Ohio

miller

A. C. ARC WELDERS

to meet all YOUR requirements...



Model 44 for Small Shops

Has same arc flexibility that has made MILLER A.C. welders the leader in the field. Continuous current adjustment two welding current ranges power supply either 110 or 220 volt 50/60 cycle A.C. current... case is 18 gauge steel readily portable over roughest floor.



Model 61-F General Utility Welder

Carries full Underwriters' Laboratory approval... high quality yet low in initial cost, comes to you complete, ready for operation... no special electrodes... no carbon blocks or starters needed. Will do all repair jobs easily and efficiently... operation is simple.

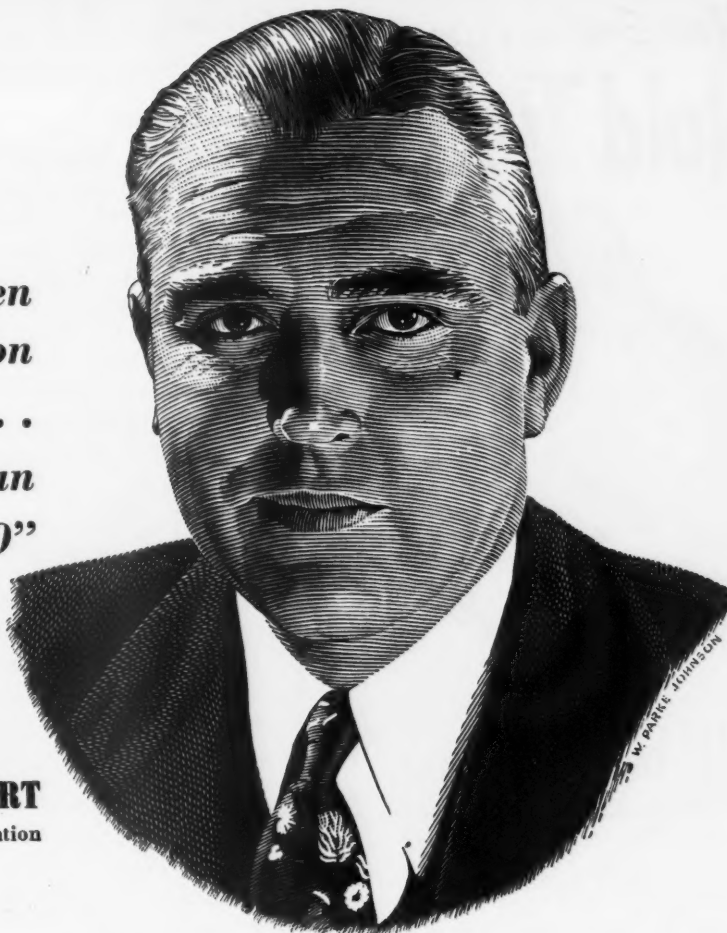


Model 88 for All Welding Jobs

For all your welding needs, MILLER Model 88 is that welder... designed especially for maintenance and heavy duty welding... extremely compact, ruggedly constructed... simple to operate. Carries full Underwriters' Laboratory approval... thousands in use all over the country.

miller
ELECTRIC MANUFACTURING CO.
SINCE 1929 APPLETON, WIS.

***"More than seven
and a quarter million
Savings Bonds . . .
worth at maturity more than
\$236,444,000"***



L. L. COLBERT
President, Chrysler Corporation

"A planned program of thrift is essential to personal, material security. The regular purchase of U.S. Savings Bonds can be a sound part of any savings program, along with investment in a home and proper insurance protection. Chrysler Corporation employees support the Payroll Savings Plan for the purchase of U.S. Savings Bonds. They have bought more than seven and a quarter million of the bonds, worth at maturity more than \$236,444,000. Such systematic thrift not only benefits them, but strengthens the economy of their country."

Largely as a result of consistent thrift by Payroll Savers, Americans today hold a cash value of more than \$49 billion in Defense Bonds. This figure is \$7.5 billion greater than at the end of the war.

Every month, 7,500,000 employees of more than 43,000 companies buy \$150 million more in Defense Bonds.

Think of the reservoir of future purchasing power represented in the more than \$49 billion that men and women have put aside for the proverbial rainy day.

Consider still another benefit to industry. The Payroll Saver is a serious worker. Records of many companies prove that lost-time accidents decrease, absenteeism is reduced and production improves as enrollment in the Payroll Plan goes up.

If your company does not have the Payroll Savings

Plan . . . or if you have the Plan and employee participation is less than 50% . . . call the attention of your President or Chief Executive to

Two Easy Steps to a Successful Payroll Savings Plan

1. Phone, wire or write to Savings Bond Division, U.S. Treasury Department, Suite 700, Washington Building, Washington, D.C.
2. Your State Director, Savings Bond Division, will tell you how to conduct a simple, person-to-person canvass that will put a Payroll Application Blank in the hands of every employee.

That is all management has to do. Your employees will do the rest. They, like thousands of Chrysler employees, want to provide for their personal security.

The U. S. Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

MOTOR AGE



"Aero-Seal" HOSE CLAMPS Hold Tight



Until You Know When!

Your mechanic fits an Aero-Seal Hose Clamp any place he can reach with a thumb and one finger—it locks tight... seals tight—and will hold until "the big freeze." Won't shake loose in a million miles of driving, and can never snap open accidentally.



REPLACE AND RE-USE AGAIN AND AGAIN

If the hose wears out, there's no waiting on the road for a spare hose clamp—no time-killing trip from the shop to the stockroom. A quick twist of the wrist and the band unlocks... ready for use. One clamp may be used and re-used—replaced in any position—year after year.



SEALS TIGHT—CAN'T CUT HOSE

Aero-Seals are scientifically designed to apply pressure evenly all around the hose—won't leak. Vibration-proof. Curved saddle prevents cutting of hose. Stainless steel—won't rust; resists corrosion. Thumb-screw and screwdriver slot types.

ALL AERO-SEAL HOSE CLAMP BANDS ARE STAINLESS STEEL

"Aero-Seal"
WORM DRIVE
HOSE CLAMPS

Another **BREEZE** Product

BREEZE CORPORATIONS, INC.
41 South Sixth St., Newark 7, N. J.

ASIdeas

Continued from Page 204

117. Batteries

The Electric Auto-Lite Co.: Said to require water only one-third as often as conventional automotive batteries, the Auto-Lite "Sta-Ful" has been adopted as original equipment on some makes of cars. Its special construction allows for more electrolyte space, thus assuring longer life and better performance, according to reports from the manufacturer.



WHEREVER A LIFT IS NEEDED USE A LEE END LIFT

For all your automotive service work and repairs the LEE Model 52 portable End Lift does the job better, faster, easier, safer and more economically. Lifts either end of a car up to 53". 3000 lb. capacity. Stores in 2 ft. sq. Write for data and price sheet. 5500 lb. capacity Truck Lift also available.



Visit us at N.A.D.A. Show
booths 70-72;
Pacific Automotive Show
booths 167-169



**AUTOMOTIVE
EQUIPMENT
MFG. CO.**

11000 South Alameda Street • Lynwood, California

WOLF'S HEAD
IS 3 STEPS AHEAD

WOLF'S HEAD
MOTOR OIL AND LUBES

100% PURE PENNSYLVANIA

Member:
Penna. Grade-Grade Oil
Association

**CAMPBELL
CHAIN**

CAMPBELL
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TIRE CHAINS

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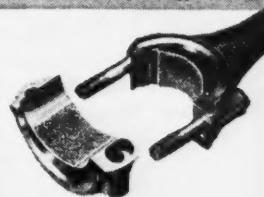
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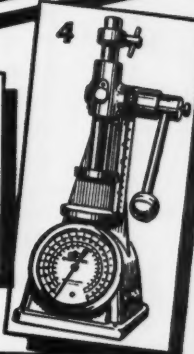
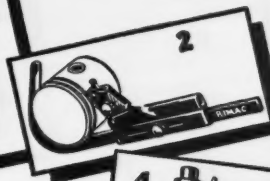
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National SYSTEM



ACTUALLY COST LESS!



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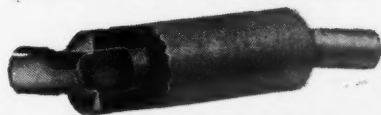
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• Every Car Owner Is A Prospect.

PORTER mufflers cut harmful back-pressure — increase power as much as 13%. For this reason more and more car owners are switching to PORTER.

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Manufacturers of Brake Lining, Brake Shoes, Re-built Cylinders
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K403



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AUTHORIZED
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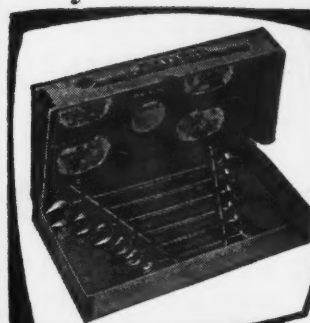
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4 TOOLS

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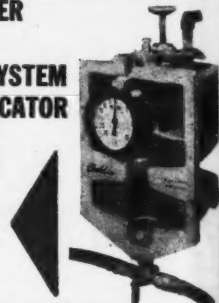
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